CU

AMIGA

AMOS STEP-BY-STEP GUIDE

THE MAGAZINE FOR A500, A500+, A600 & A1200 OWNERS

SAVE £80!

DOUBLE DISK DYNAMITE

DISK 54 A500, A500+, A600, A1200 COMPATIBLE CU AMIGA

AMOS COMPILER

Supercharge your AMOS programs! AMOS Compiler will make your AMOS programs run like greased lightening. Most programs will double in speed and some commands are up to 5 times faster. Also features an amazing compactor which will squash the size of your programs by up to 80% in a matter of seconds. With the incredible speed increases and program compaction the AMOS Compiler will give your programs that professional edge. (1Mb required)

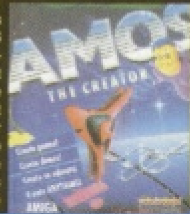


WORTH £80!

AMOS 1.35

A1200 compatible!

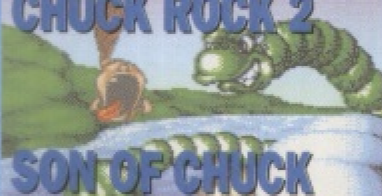
Here's the latest update of the original AMOS program, guaranteed to work on all Amigas. Whether you want to create arcade games, demos or even serious applications – AMOS will turn your dreams into reality. AMOS Basic is a sophisticated development language with more than 500 different commands at your disposal. (1Mb required – example games and demos not included)



NO DISK ATTACHED?
ASK YOUR NEWSAGENT

DISK 55 A500, A500+, A600, A1200 COMPATIBLE CU AMIGA

CHUCK ROCK 2 SON OF CHUCK

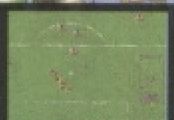


Ugabunga! The man with the biggest beer belly ever seen in a computer game is back and this time he's brought along his son. There are prehistoric platform japes aplenty in this huge playable demo from Core. (1Mb demo)

F.A. PREMIER LEAGUE

'Ere we go, 'ere we go, 'ere we go with a huge 2-minute demo of Ocean's brand new Premier League kickabout. (1Mb demo)





NO DISK ATTACHED?
ASK YOUR NEWSAGENT



AMAZING!

AMIGA ROBOTICS

TERRIFYING!

IS YOUR AMIGA SMARTER THAN YOU?

ASTOUNDING!

AMOS COMPILER

GVP A1230

DELUXE MUSIC 2

DESERT STRIKE

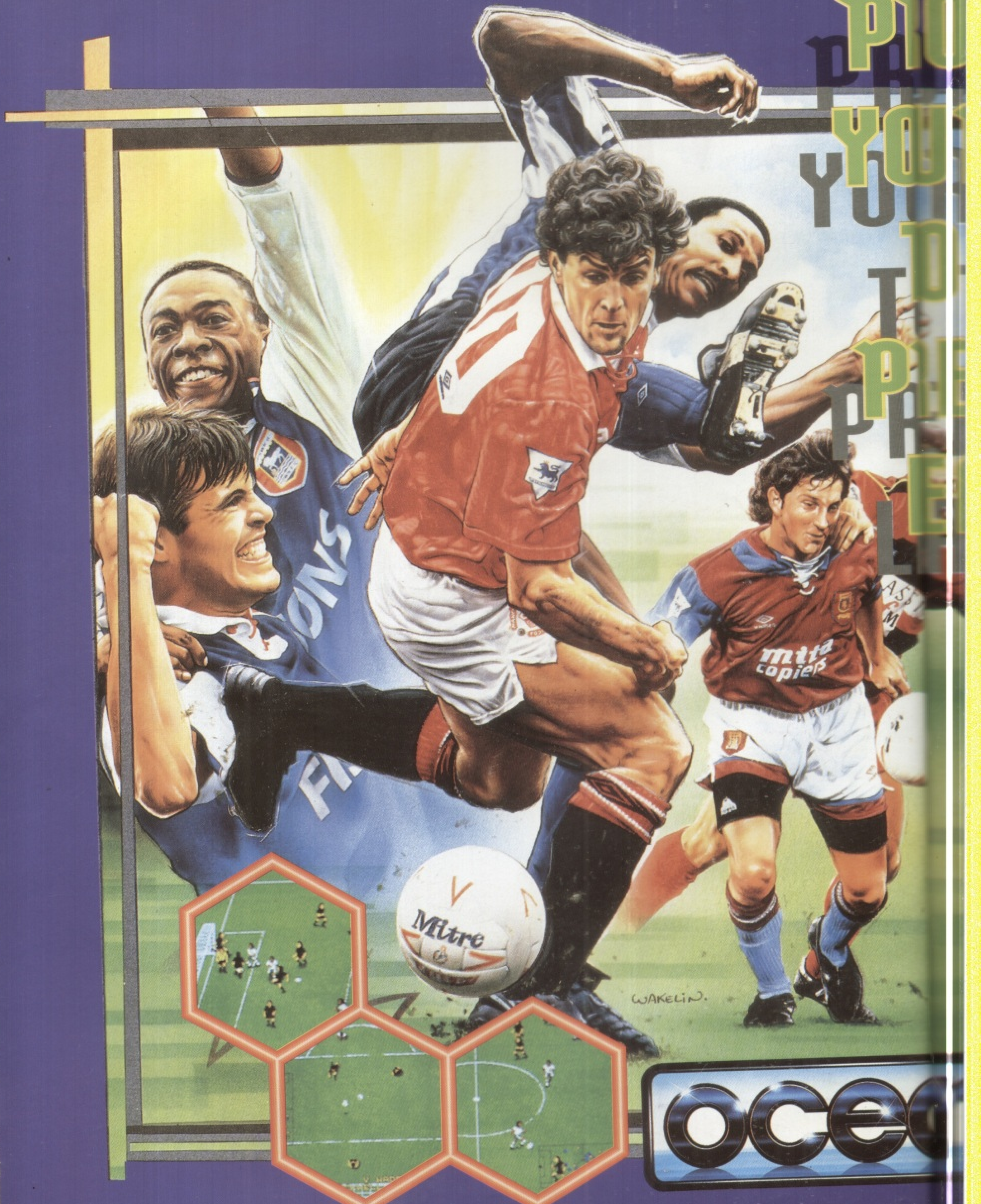
APRIL £3.95 US$6.95
CA$9.95 DM20
PTA 995 L13600 ASCH 170
AN EMAP PUBLICATION

WIN! WIN! WIN!

CAPTAIN DIAMOND'S PRIZE BONANZA
THREE A1200s UP FOR GRABS-SEE INSIDE!

04

9 770963 009020


Mitre
WAKELIN.

ROMOTE
URSELF
O THE
REMIER
EAGUE



THE F.A. PREMIER LEAGUE

FOOTBALL

TWIN VIEWS - Overhead and Grandstand.

TACTICS - More comprehensive than any other soccer simulation - you can even design your own.

ONE TOUCH FOOTBALL - For fast, fluid, flowing football.

SPECTACULAR - Large, superbly animated players.

AUTHENTIC - All 22 Premier League clubs and their strips.

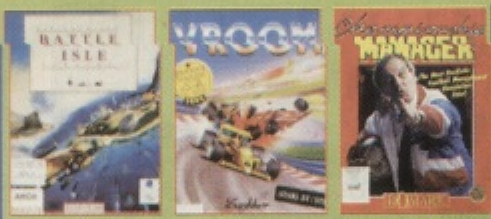
REALISTIC - Wind and pitch conditions that truly influence gameplay.

ONE OR TWO PLAYER - Play against the computer, play against a friend or join forces with your friend against the computer. Each team may be "managed" by a different player.

Ocean Software Limited, 2 Castle St,
Castlefield, Manchester, M3 4LZ.
Tel 061 832 6633
Fax 061 834 0650

CIAL RESERVE • SPECIAL RESERVE • SPECIAL RESERVE • SPECIAL RESER

SPECIAL OFFERS FROM £6.99



BATTLE ISLE 13.49 | VROOM 12.99 | CHAMP MGR 12.99



TITUS THE FOX 9.49 | PINBALL DREAMS 12.99 | GRAHAM TAYLORS 10.99

• STAR BUYS • • STAR BUYS •



F1 GRAND PRIX 14.99 | HOOK 11.99 | FIRST SAM/ MEGA 13.99 | ADDAMS FAMILY 11.99



ENCHANTIA 12.99 | DUNE 13.49 | MONKEY ISLAND 13.49 | ROBOCOP 3 11.49

• STAR BUYS • • STAR BUYS •



ELITE 10.99 | F15 STRIKE 2 11.99 | BATTLE OF BRITAIN 13.99



F19 STEALTH 14.99 | LEMMINGS 12.49 | XENON 2 7.99



SIM CITY & POP 16.99 | RAILROAD TYCOON 13.99 | JAGUAR XJ220 10.99 | ISHAR 10.49 | LOTUS 2 11.99 | BLUES BROTHERS 8.99 | PREMIERE 11.99 | JACK NICKLAUS 6.99 | KICK OFF 2 8.99 | CRAZY CARS 3 9.99

Games marked NOP will not work on A500 Plus, A600 or A1200. Games marked NO12 will not work on the A1200. All prices include VAT and UK postage

3D CONSTRUCTION KIT 14.49
3D CONSTRUCTION KIT 2 ....31.99
A320 AIR-BUS (1 MEG) 21.99
ADDAMS FAMILY (1 MEG) 11.99
ADI ENGLISH (11-12) 16.99
ADI ENGLISH (12-13) 16.99
ADI ENGLISH (13-14) 16.99
ADI FRENCH (11-12) 16.99
ADI FRENCH (12-13) 16.99
ADI FRENCH (13-14) 16.99
ADI MATHS (11-12) 16.99
ADI MATHS (12-13) 16.99
ADI MATHS (13-14) 16.99
ADVANTAGE TENNIS (NO12) 16.99
AFTERBURNER 7.49
AIR BUCKS 17.99
AIR FORCE COMMANDER (1 MEG) (NO12) 17.99
AIR SEA SUPREMACY (GUNSHIP, SILENT SERVICE, P47, WINGS, CARRIER COMMAND) (NO12) 19.99
AIR, LAND & SEA (688 ATTACK SUB, INDY 500, F18 INTERCEPTOR) 22.99
ALCATRAZ 15.99
ALIEN 3 ....19.49
ALIEN BREED (SPECIAL EDITION) (1 MEG) 8.99
AMNIOS 8.99
AMOS (GAMES CREATOR) 29.99
AMOS 3D (REQUIRES AMOS) 22.99
AMOS COMPILER (REQUIRES AMOS) 19.99
AMOS EASY (FIRST STEPS TO PROGRAMMING) 22.99
AMOS PROFESSIONAL (MORE COMPLEX VERSION OF AMOS) 44.99
ANOTHER WORLD 16.99
APIDYA 17.49
AQUATIC GAMES 16.99
ARABIAN NIGHTS (NO12) 15.99
ARCHER MACLEAN'S POOL 17.49
ARKANOID 2 ....7.49
ARMOUR-GEDDON 2 (NO12) 19.49
ASHES OF EMPIRE 22.99
ASSASSIN (1 MEG) 16.99
AV8B HARRIER ASSAULT 21.99
B.A.T 2 ....22.99
B17 FLYING FORTRESS (1 MEG) 22.99
BART Vs THE WORLD 19.49
BATMAN THE MOVIE 7.49
BATTLE ISLE 13.49
BATTLE ISLE DATA DISK 13.99
BATTLE OF BRITAIN 13.99
BATTLEHAWKS 1942 (NO12) 10.99
BC KID 17.49
BEACH VOLLEY (NO12) 7.49
BILL'S TOMATO GAME 16.99
BIRDS OF PREY (1 MEG) (NO12) 22.99
BLACK CRYPT (1 MEG) 16.99
BLUES BROTHERS 8.99
BODY BLOWS (1 MEG) 16.99
BOXING MANAGER (NO12) 7.49
BUG BOMBER 17.49
CAESAR (NO12) 17.99
CAMPAIGN (1 MEG) (NO12) 21.99
CARL LEWIS TRACK & FIELD CHALLENGE 16.99
CASTLES (1 MEG) (NO12) 19.49
CASTLES DATA DISK (NO12) 11.99
CELTIC LEGENDS 19.99
CHAMPIONSHIP MANAGER (1 MEG) 12.99
CHAOS ENGINE 16.99
CHUCK ROCK (NO12) 8.99
CHUCKIE EGG (NO12) 9.99
CHUCKIE EGG 2 (NO12) 9.99

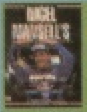
CIVILIZATION (1 MEG) 22.99
COMBAT AIR PATROL (NO12) 19.99
COMBAT CLASSICS (F15 STRIKE EAGLE 2, 688 ATTACK SUB, TEAM YANKEE) (1 MEG) (NO12) 19.49
CONTRAPTION (NO12) 13.99
COOL WORLD (1 MEG) 17.49
CORRUPTION (M/SCROLLS) 3.99
CRAZY CARS 2 (NO12) 8.99
CRAZY CARS 3 ....9.99
CREEPERS (NO12) 19.49
CRUISE FOR A CORPSE 18.49
CURSE OF ENCHANTIA (1 MEG) 12.99
CYTRON 19.49
D-GENERATION 11.99
DAILY SPORTS COVER GIRL POKER 15.99
DARK QUEEN OF KRYNN (1 MEG) 21.99
DARKMERE (1 MEG) 15.99
DARKSEED (1 MEG) 20.99
DELUXE PAINT 4 (1 MEG) (HAM MODE & ANIMATION) 54.99
DOODLEBUG 13.99
DRAGONS LAIR 3 (1 MEG) (NO12) 22.99
DUNE (1 MEG) 13.49
DUNE 2 (1 MEG) 19.99
DUNGEON MASTER & CHAOS (1 MEG) 19.49
DYNA BLASTERS 19.99
ELITE (NO12) 10.99
EPIC (1 MEG) 19.49
ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS (NO12) 7.49
ESPANA-THE GAMES 92 (1 MEG) (NO12) 19.49
EYE OF THE BEHOLDER (SSI) (1 MEG) 19.99
EYE OF THE BEHOLDER 2 (1 MEG) 23.99
F.A PREMIER LEAGUE FOOTBALL (NO12) 17.49
F15 STRIKE EAGLE 2 (1 MEG) 11.99
F16 FALCON (NO12) 10.99
F19 STEALTH FIGHTER (NOP) 14.99
FABLES & FIENDS-LEGEND OF KYRANDIA (NO12) (1 MEG) 22.99
FANTASTIC WORLDS (REALMS, PIRATES, MEGA LO MANIA, POPULOUS, WONDERLAND) (1 MEG) (NO12) 22.99
FINAL COPY 2 WORD PROCESSOR 69.99
FIRE & ICE 17.49
FIRST SAMURAI + MEGA LO MANIA (NO12) 13.99
FLAMES OF FREEDOM (MIDWINTER 2) 11.99
FLIGHT SIMULATOR 2 (NO12) 23.99
FLOOR 13 ....19.99
FOOTBALLER OF THE YEAR 2 ....8.49
FORMULA 1 GRAND PRIX (1 MEG) 14.99
FUN SCHOOL 2 (2-6) 7.99
FUN SCHOOL 2 (6-8) 7.99
FUN SCHOOL 2 (8+) 7.99
FUN SCHOOL 3 (2-5) 16.99
FUN SCHOOL 3 (5-7) 16.99
FUN SCHOOL 3 (7+) 16.99
FUN SCHOOL 4 (2-5) 16.99
FUN SCHOOL 4 (5-7) 16.99
FUN SCHOOL 4 (7+) 16.99
FUN SCHOOL SPECIAL - MERLIN'S MATHS (7-11) 16.99
FUN SCHOOL SPECIAL - PAINT 'N CREATE EDUCATIONAL ART (5+) 16.99
FUN SCHOOL SPECIAL - SPELLING FAIR (7-13) 16.99
FUTURE WARS (NO12) 9.99
GAUNTLET 2 (NO12) 7.49
GHOULS 'N' GHOSTS 7.49
GOBLIIINS 15.99

GOBLIIINS 2 ....17.99
GOLDEN AXE 8.49
GOLF (OCEAN) (NO12) 16.99
GOLF WORLD CLASS LEADERBOARD 8.49
GRAHAM GOOCH WORLD CLASS CRICKET (NO12) 17.99
GRAHAM TAYLOR'S SOCCER MANAGER (1 MEG) 10.99
GREAT NAVAL BATTLES (1 MEG) (NO12) 24.99
GUNSHIP 2000 (1 MEG) 22.49
GUY SPY (1 MEG) 19.49
HARPOON V1.21(1 MEG) 22.99
HEAD OVER HEELS 7.49
HEIMDALL (1 MEG) (NO12) 11.99
HEROQUEST 8.49
HEROQUEST 2 - LEGACY OF SORASIL (1 MEG) 16.99
HISTORYLINE 1914-18 (1 MEG) 22.49
HITCH HIKERS GUIDE (NO12) 8.99
HOLLYWOOD COLLECTION (ROBOCOP, GHOSTBUSTERS 2, INDIANA JONES ACTION, BATMAN THE MOVIE) D/S (NOP) 10.99
HOME ACCOUNTS 2 ....38.99
HOME ALONE 2 (NO12) 19.99
HOME OFFICE KIT DELUXE (KIND WORDS 3 (WORD PROCESSOR), MAXI PLAN 4 (SPREADSHEET), AND INFOFILE (BUSINESS UTILITIES)). REQUIRES ONE EXTERNAL DISK DRIVE OR HARD DRIVE. (1 MEG) 59.99
HOOK 11.99
HOT HATCHES (NO12) 17.49
HUMANS (NO12) 17.99
HUMANS DATA DISK (NO12) 12.99
IAN BOTHAM'S CRICKET (1 MEG) 19.49
IK+ 7.49
INDIANA JONES 2 ACTION (FATE OF ATLANTIS) (NO12) 17.49
INDIANA JONES 2 ADVENTURE (FATE OF ATLANTIS) (1 MEG) (NO12) 23.99
INTERNATION RUGBY CHALLENGE 17.49
ISHAR - LEGEND OF THE FORTRESS 10.49
JACK NICKLAUS GOLF 6.99
JAGUAR XJ220 (1 MEG) 10.99
JAMES POND (NO12) 7.49
JAMES POND 2 - ROBOCOD 16.99
JET SET WILLY (NO12) 9.99
JIMMY WHITES SNOOKER 13.99
JINXTER (M/SCROLLS) 3.99
JOHN BARNES EUROPEAN FOOTBALL 15.49
JOHN MADDEN'S (U.S.) FOOTBALL 16.99
KGB (NO12) 19.99
KICK OFF + EXTRA TIME DISK (NOP) 4.99
KICK OFF 2 (1 MEG) (NO12) 8.99
KIDSTYPE JUNIOR WORD PROCESSOR 13.99
KIND WORDS 3 WORD PROCESSOR 30.99
KNIGHTMARE 19.99
KNIGHTS OF THE SKY (1 MEG) 22.99
KRUSTY'S SUPER FUN HOUSE 19.49
LAST NINJA 2 (NO12) 7.49
LEATHER GODDESSES (NO12) 8.99
LEGEND 19.99
LEGENDS OF VALOUR (1 MEG) (NO12) 23.99
LEMMINGS 12.49
LEMMINGS 2 ....20.99
LEMMINGS DATA DISK - OH NO! 9.99
LETHAL WEAPON (1 MEG) 16.99
LOMBARD RAC RALLY 7.49
LOTUS 3 - THE FINAL CHALLENGE (1 MEG) (NO12) 16.99
LOTUS ESPRIT TURBO CHALLENGE (NO12) 8.49

LOTUS TURBO CHALLENGE 2 (NO12) 11.99
LURE OF THE TEMPTRESS (1 MEG) (NO12) 13.49
MAGIC WORLDS (STORM MASTER, DRAGONS BREATH, CRYSTALS OF ARBOREA) (NO12) 15.99
MANCHESTER UNITED (NO12) 8.49
MANIC MINER (NO12) 9.99
McDONALDS LAND (NO12) 17.49
MEGA SPORTS (SUMMER GAMES 1 & 2, WINTER GAMES) (NO12) 16.99
MEGA TWINS (NO12) 14.49
MICRO ENGLISH (8 YRS TO GCSE. CONFORMS TO NATIONAL CURRICULUM) 16.99
MICRO FRENCH (BEGINNER TO GCSE. CONFORMS TO NATIONAL CURRICULUM) 16.99
MICRO GERMAN (BEGINNER TO GCSE AND BUSINESS LEVEL. CONFORMS TO NATIONAL CURRICULUM) 16.99
MICRO MATHS (11 YRS TO GCSE. CONFORMS TO NATIONAL CURRICULUM) 16.99
MICROPROSE 3D GOLF (1 MEG) 13.99
MIDNIGHT RESISTANCE (NO12) 7.49
MIDWINTER 9.99
MINI OFFICE (WORD PROCESSOR, SPREADSHEET, DATABASE AND DISK UTILITIES) 37.99
MOKEY ISLAND (SECRET OF) 13.49
MOTORHEAD (NO12) 11.99
NEW ZEALAND STORY 7.49
NICKY BOOM 16.99
NIGEL MANSELL'S WORLD CHAMPIONSHIP (1 MEG) 18.49
NODDY'S PLAYTIME (EDUCATIONAL PROGRAM FOR CHILDREN AGED 3+) (1 MEG) 16.99
OPERATION WOLF (NO12) 7.49
PACMANIA (NO12) 7.49
PANG 7.49
PANZA KICK BOXING (NO12) 8.49
PARASOL STARS 16.99
PERFECT GENERAL 22.49
PERFECT GENERAL DATA DISK 13.99
PGA TOUR GOLF + COURSES 19.49
PGA TOUR GOLF COURSE DISK 11.49
PINBALL DREAMS (1 MEG) 12.99
PINBALL FANTASIES 17.99
PIRATES (NOP) 16.99
PITFIGHTER 7.49
POPULOUS & SIM CITY 16.99
POPULOUS 2 (1 MEG) + CHALLENGE DATA DISK 21.99
POPULOUS 2 CHALLENGE DATA DISK (1 MEG) 11.99
POWER UP (CHASE H.Q, TURRICAN, X-OUT, ALTERED BEAST, RAINBOW ISLANDS) (NOP) 10.99
POWERDRIFT 3.99
POWERMONGER (NO12) 19.49
POWERMONGER WW1 DATA DISK (NO12) 11.49
POWERWORKS (MAXIPLAN PLUS SPREADSHEET, KIND WORDS 2 WORD PROCESSOR, INFOFILE DATABASE) (NOP) 19.99
PREHISTORIK (NO12) 8.49
PREMIER MANAGER (1 MEG) 16.49
PREMIERE (1 MEG) 11.99
PRINCE OF PERSIA (1 MEG) 7.49
PRO TENNIS TOUR 2 ....16.99
PROJECT X (1 MEG) 16.99

PUBLISHER (PAGE LAYOUT PACKAGE). CAN PRODUCE BLACK AND WHITE NEWSLETTERS, FLYERS, ANNUAL REPORTS AND MAGAZINES. REQUIRES ONE EXTERNAL DISK DRIVE OR HARD DRIVE. (1 MEG) 33.99
PUBLISHER COLOUR PRO (PAGE LAYOUT PACKAGE). CAN PRODUCE COLOUR NEWSLETTERS, PROMOTIONAL POSTERS, ANNUAL REPORTS AND MAGAZINES. REQUIRES ONE EXTERNAL DISK DRIVE OR HARD DRIVE. (1 MEG) 79.99
PUSH-OVER (1 MEG) 16.99
PUTTY (NO12) 17.99
QUEST & GLORY (BLOODWYCH, MIDWINTER, CADAVER, BAT) (NO12) 14.49
QUESTRON 2 (SSI) (NO12) 4.99
R-TYPE (NO12) 7.49
RAGNAROK (NO12) 21.99
RAILROAD TYCOON (1 MEG) 13.99
RAINBOW COLLECTION (BUBBLE BOBBLE, RAINBOW ISLANDS, NEW ZEALAND STORY) (NOP) 9.99
RAVING MAD (MEGA TWINS, JAMES POND 2 - ROBOCOD, RODLAND) (NO12) 16.99
RBI BASEBALL 2 (NOP) 18.99
REACH FOR THE SKIES (NO12) 19.99
RICK DANGEROUS (NO12) 7.49
ROAD RASH 17.49
ROBOCOP 2 (NO12) 7.49
ROBOCOP 3 (NO12) 11.49
ROME (1 MEG) 19.49
ROOKIES 19.99
SABRE TEAM 15.99
SCRABBLE (US GOLD) 18.99
SECRET OF MONKEY ISLAND (1 MEG) 13.49
SECRET OF MONKEY ISLAND 2 (1 MEG) 23.99
SENSIBLE SOCCER ('92/93 SEASON) 16.99
SHADOW OF THE BEAST 2 (WITH T-SHIRT) 8.99
SHADOW OF THE BEAST 3 ....19.49
SHADOWLANDS 19.49
SHADOWORLDS 15.99
SHOOT-'EM-UP CONSTRUCTION KIT (NO12) 8.49
SHUTTLE (1 MEG) 19.99
SILENT SERVICE 2 (1 MEG) (NOP) 22.99
SIM CITY & POPULOUS 16.99
SIM CITY ANCIENT CITIES 8.99
SIM CITY FUTURE WORLDS 8.99
SLEEPWALKER 20.49
SMASH TV (NO12) 7.49
SPACE CRUSADE (NO12) 12.99
SPACE CRUSADE DATA DISK (NO12) 10.99
SPECIAL FORCES (1 MEG) 22.99
SPIRIT OF EXCALIBUR (1 MEG) (NOP) 9.99
SPORTS MASTERS (PGA GOLF, INDY 500, ADVANTAGE TENNIS, EUROPEAN CHAMPIONSHIP'S 1992) (1 MEG) (NO12) 19.99
STORM MASTER 18.49
STRATEGY MASTERS (POPULOUS, HUNTER, SPIRIT OF EXCALIBUR, CHESSPLAYER 2150, BATTLEMASTER) (1 MEG) (NO12) 20.99
STREETFIGHTER 2 (NO12) 18.49
STRIKER (1 MEG) 15.99
STUART PEARCE'S SOCCER SELECTION'S (KICK OFF 2, MICROPROSE SOCCER, MANCHESTER UNITED, INTERNATIONAL SOCCER) (NO12) 19.99
STUNT CAR RACER (NO12) 7.49
SUPER CARS 2 (NOP) 8.49

SUPER CAULDRON (NO12) 17.49
SUPER FROG (1 MEG) 16.99
SUPER HANG ON 7.49
SUPER HERO (NO12) 19.49
SUPREMACY (1 MEG) 16.99
SWITCHBLADE 2 (NO12) 8.49
SWIV (NOP) 8.49
SWORD OF SODAN (NO12) 5.99
TEARAWAY THOMAS 17.49
TECNOPLUS BUSINESS PACK FOR AMIGA (WORDWORTH WORD PROCESSOR, K-SPREAD 2 SPREADSHEET AND K-DATA DATABASE) (1 MEG) 65.99
THE LOST TREASURES OF INFOCOM 1 (20 CLASSIC INFOCOM TITLES) (NO12) 27.99
THE MANAGER 19.99
THUNDERHAWK 10.49
TITUS THE FOX 9.49
TRANSARTICA 17.99
TRODDLERS 15.99
TROJAN - ALIEX (LIGHT PHAZER GAME) 8.99
TROJAN - CYBER ASSAULT (LIGHT PHAZER GAME) 8.99
TROJAN - FIRESTAR (LIGHT PHAZER GAME) 8.99
TROJAN - THE ENFORCER (LIGHT PHAZER GAME) 8.99
TURRICAN 7.49
TURRICAN 2 ....7.49
TV SPORTS BASEBALL (NO12) 11.49
TV SPORTS BOXING (NO12) 11.49
TV SPORTS FOOTBALL (NO12) 7.99
UGH 17.49
ULTIMA 5 (NO12) 16.99
UNIVERSAL MONSTERS 16.99
VAL HALLER VGA 19.99
VIDEO KID 8.49
VIKINGS - FIELD OF CONQUEST (1 MEG) 16.99
VROOM (NO12) 12.99
VROOM DATA DISK (NO12) 12.49
WALKER 19.49
WAXWORKS (1 MEG) 22.49
WHEELS OF FIRE (HARD DRIVIN', POWERDRIFT, CHASE H.Q, TURBO OUTRUN) (NO12) 8.99
WING COMMANDER 1 (1 MEG) 22.99
WIZ-KID 16.99
WIZARDRY 6 - BANE OF THE COSMIC FORGE (1 MEG) 24.49
WIZARDRY 7 - CRUSADERS OF THE DARK SAVANT (1 MEG) 28.99
WOLFCHILD 12.99
WORDWORTH V1.1E AMIGA 500 PLUS WORD PROCESSOR (SPECIAL ENHANCED 2 MEG VERSION WITH 1 MEG UPGRADE FOR A500P) 79.99
WORDWORTH V1.1E AMIGA 600 WORD PROCESSOR (SPECIAL ENHANCED 2 MEG VERSION WITH 1 MEG UPGRADE FOR A600) 94.99
WWF WRESTLING (NO12) 16.99
WWF WRESTLING 2 (1 MEG) 16.99
XENON 2 MEGABLAST 7.99
ZAK MCKRACKEN (NO12) 5.99
ZOOL (1 MEG) 16.99



WIN an autographed copy of Nigel Mansell's! Full details in the latest issue of NRG - join Special Reserve NOW to get your copy!

MISCELLANEOUS



EXTERNAL 3.5" DISK DRIVE FOR AMIGA WITH SONY/CITIZEN DRIVE MECHANISM. QUIET, HIGH QUALITY, SLIM LINE DESIGN. GG5792 49.99



DELUXE WORK CENTRE FOR AMIGA A1200 (STEEL MONITOR STAND WITH EXTRA SHELF FOR EXTERNAL DISK DRIVE AND ACCESSORIES, MOUSE HOLDER, MOUSE MAT AND ALL IN ONE DUST COVER) GG9134 37.99

SCREENBEAT STEREO SPEAKERS FOR AMIGA OR IBM PC. REQUIRES 4AA BATTERIES OR MAINS ADAPTOR. DESIGNED SPECIFICALLY FOR COMPUTERS, INCLUDING MOUNTINGS FOR ATTACHMENT TO MONITOR. GG6593 18.99



DELUXE WORK CENTRE FOR AMIGA A600 OR A500 PLUS (STEEL MONITOR STAND WITH EXTRA SHELF FOR EXTERNAL DISK DRIVE AND ACCESSORIES, PLUS JOYSTICK/MOUSE EXTENDER CABLE SET, MOUSE HOLDER, MOUSE MAT AND ALL IN ONE DUST COVER) GG9132 ....44.99

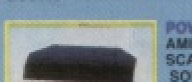
DELUXE WORK CENTRE FOR AMIGA A600 (STEEL MONITOR STAND WITH EXTRA SHELF FOR EXTERNAL DISK DRIVE AND ACCESSORIES, MOUSE HOLDER, MOUSE MAT AND ALL IN ONE DUST COVER) GG9133 ....37.99

MAINS ADAPTOR FOR SCREENBEAT SPEAKERS ....GG6638 ....7.99

MEGAMIX MASTER SOUND SAMPLER FOR AMIGA (1 MEG) 29.99



VIDI AMIGA 12 (CAPTURES COLOUR IMAGES FROM VIDEO / CAMCORDER. COMPATIBLE WITH TAKE 2, DELUXE PAINT 4 AND MOST ART PACKAGES) GG9083 89.99



POWER SCAN HAND SCANNER FOR AMIGA (VERSION 2). TRUE GREY SCALE, 100-400DPI (INCLUDES SOFTWARE) 99.99

SOUND ENHANCER FOR AMIGA (BOOSTS SOUND) 34.99



A570 CD DRIVE FOR AMIGA A500 OR A500P. PLUGS INTO SCSI PORT TO RUN CDTV SOFTWARE. 1 MEG RAM REQUIRED

FREE MEMBERSHIP GG9054 ....329.99

TECNOPLUS AMIGA FAMILY COMPENDIUM (KINDWORDS 3 WORD PROCESSOR, JIMMY WHITE'S SNOOKER, ZIPSTICK JOYSTICK, DUST COVER, FILE-A-DISK, HEAD CLEANER, 5 BLANK DISKS AND MOUSE MAT) ....GG9023 ....51.99

TECNOPLUS AMIGA POWER SUPPLY (SPECIAL COOL RUNNING TRANSFORMER WITH SWITCH MODE) 42.99

TECNOSOUND TURBO SOUND SAMPLER FOR AMIGA (INCLUDES LEAD FOR ATTACHMENT TO WALKMAN/DISCMAN AND REVISED MANUAL) 29.99

ZYDEC STEREO SPEAKERS FOR AMIGA WITH BUILT-IN AMPLIFIER AND VOLUME CONTROLS. 34.99

NULL MODEM CABLE ....GG5153 ....7.99

RF SWITCH FOR AMIGA (SWITCH BETWEEN TV AERIAL AND COMPUTER WITHOUT DISCONNECTING) GG6617 ....3.99

CLEANING KIT FOR COMPUTERS (INCLUDES VACUUM) ....GG6542 ....19.99

LEADS

HI-FI LEAD FOR AMIGA (STANDARD PHONO INPUT) ....GG6615 ....3.99
MONITOR LEAD FOR AMIGA TO PHILIPS CM8833 MK2 MONITOR ....GG5961 ....7.99
SCART LEAD FOR AMIGA TO SONY TELEVISION (GIVES MONITOR QUALITY PICTURE) ....GG9135 ....9.99
SCART LEAD FOR AMIGA TO TV WITH SCART INPUT(GIVES MONITOR QUALITY PICTURE) ....GG5762 ....9.99

DUST COVERS

DUST COVER FOR A600 ....GG9013 ....4.99
DUST COVER FOR AMIGA 500 OR ATARI ST (CLEAR PVC) ....GG5312 ....4.99
DUST COVER FOR MONITOR (CLEAR PVC) ....GG5314 ....4.99

MEMORY UPGRADES

1 MEGABYTE A500 PLUS RAM UPGRADE WITH CLOCK (TECNOPLUS) ....GG6652 ...34.99
1 MEGABYTE A600 RAM UPGRADE WITH CLOCK ....GG6700 ...49.99
512K AMIGA RAM WITH CLOCK FOR A500 AND A500+ ....GG6580 ...24.99
512K AMIGA RAM WITHOUT CLOCK FOR A500 AND A500+ ....GG6581 ...22.99



JOYSTICKS
P&P inc.
CHEETAH "ALIEN 3" JOYSTICK 12.99
CHEETAH "BART SIMPSON" JOYSTICK 12.99
CHEETAH BUG JOYSTICK 12.99
COMPETITION PRO EXTRA JOYSTICK (CLEAR BASE) GG5146 12.99
COMPETITION PRO STAR JOYSTICK 12.99
GRAVIS JOYSTICK FOR AMIGA OR ATARI ST WITH FOAM PADDED GRIP, ADJUSTABLE HANDLE TENSION AND PROGRAMMABLE FIRE BUTTONS GG9022 23.99
LOGIC 3 SIGMA-RAY JOYSTICK GG6575 12.99
MINI COMPETITION PRO 5000 JOYSTICK GG9050 12.99
MINI COMPETITION PRO STAR JOYSTICK WITH AUTOFIRE GG9051 17.99
QUICKJOY FOOT PEDAL TRANSFERS ANY JOYSTICK FUNCTIONS TO FOOT PEDALS. IDEAL FOR FLIGHT AND CAR SIM'S. COMPATIBLE WITH MOST AMIGA AND ATARI ST GAMES. GG6576 20.49
QUICKJOY JET FIGHTER JOYSTICK GG5287 11.99
QUICKJOY QJ1 JOYSTICK (MICROSWITCHED) GG6643 7.99
FREEWHEEL STEERING WHEEL (DIGITAL) FOR AMIGA, SUITS MOST DRIVING GAMES GG9005 26.99
FOUR PLAYER JOYSTICK ADAPTOR FOR AMIGA OR ATARI ST 7.99
SQUIK MOUSE FOR AMIGA OR ATARI ST GG5855 12.99
TROJAN LIGHT PEN FOR AMIGA COMPATIBLE WITH DELUXE PAINT 3 & 4 AND OTHER MAJOR ART PACKAGES. INCLUDES KWIKDRAW DRAWING PROGRAM AND DRIVER DISK GG9074 29.99
QUICKJOY TOP STAR JOYSTICK GG5751 20.49
QUICKSHOT 111A TURBO 2 JOYSTICK GG5656 9.99
QUICKSHOT 127 STARFIGHTER REMOTE CONTROLLER WITH TWO INFRA-RED JOYPADS GG5654 29.99
QUICKSHOT 128F MAVERICK 1 JOYSTICK GG5655 12.99
QUICKSHOT 137F PYTHON JOYSTICK GG5653 9.99
QUICKSHOT 149 INTRUDER 1 JOYSTICK GG6644 22.99
QUICKSHOT 155 AVIATOR 1 JOYSTICK GG6686 23.99
SPEEDKING ANALOGUE JOYSTICK FOR AMIGA (FOR PROPORTIONAL CONTROL ON SUITABLE SOFTWARE) GG9008 13.99
TROJAN LIGHT PHAZER GUN FOR AMIGA WITH SKEET SHOOT & ORBITAL DESTROYER GAMES (OTHER GAMES AVAILABLE - SEE "TROJAN" IN AMIGA SOFTWARE LIST) GG9000 29.99
NAKSHA MOUSE FOR AMIGA OR ATARI ST WITH OPERATION STEALTH GG5235 27.99
ZYDEC TRACKBALL GG6650 25.99
MOUSE MAT GG5148 4.99
JOYSTICK EXTENDER CABLE FOR AMIGA (3 METRES) GG6613 6.99
ROBOSHIFT INTERFACE FOR AMIGA (PLUGS MOUSE & JOYSTICK INTO ONE PORT) GG5856 14.99
PORT EXTENSION ADAPTOR FOR AMIGA (CHANGE JOYSTICKS WITHOUT NEEDING TO REACH BEHIND COMPUTER) GG6616 5.99
PRINTERS FOR AMIGA
CITIZEN SWIFT 9 PRINTER WITH COLOUR KIT 9 PIN, 80 COLUMN, 192CPS/48NLQ, 3NLQ/1 DRAFT FONT, 2 YEAR WARRANTY. A 9 PIN PRINTER WITH COLOUR FACILITY AND FULL PAPER HANDLING FUNCTIONS.
179.99
FREE PRINTER LEAD MEMBERSHIP GG5607
CANON BJ-10EX BUBBLE JET PRINTER 64 NOZZLE, 80 COLUMN, 83LQ CPS 2LQ/1 DRAFT FONT, 1 YEAR WARRANTY. A SMALL, PORTABLE PRINTER, VERY QUIET IN OPERATION YET GIVING OUTSTANDING PRINT QUALITY.
214.99
FREE PRINTER LEAD MEMBERSHIP GG6632
CITIZEN 120D+ PRINTER 9 PIN, 80 COLUMN, 144 CPS/25NLQ, 2NLQ/1 DRAFT FONT, 2 YEAR WARRANTY. HIGH QUALITY BLACK AND WHITE PRINTER.
129.99
FREE PRINTER LEAD MEMBERSHIP GG6541
CANON AUTO CUT SHEET FEEDER FOR BJ-10EX PRINTER GG9126 54.99
INK CARTRIDGE FOR BJ-10EX PRINTER GG6637 19.99
CANON NICAD BATTERY PACK FOR BJ-10EX PRINTER GG9125 39.99
CITIZEN 240C PRINTER WITH COLOUR KIT, 24 PIN, 80 COLUMN, 240CPS/80LQ, 9LQ/1 DRAFT FONT, 2 YEAR WARRANTY. ADVANCED VERSION OF 24E WITH AUTOSET FEATURE AND LCD CONTROL PANEL
279.99
FREE PRINTER LEAD MEMBERSHIP GG9020
CANON BJ-200 BUBBLE JET PRINTER 80 COLOUMN, 248 CPS, 8 TYPEFACES. THREE PRINTING MODES, I YEAR WARRANTY. A FAST AND QUIET PRINTER WHICH GIVES EXCEPTIONAL QUALITY RESULTS.
399.99
FREE PRINTER LEAD MEMBERSHIP GG9138
CITIZEN SWIFT 200 PRINTER WITH COLOUR KIT 24 PIN, 80 COLUMN, 216CPS/72LQ 6 LQ/1 DRAFT FONT, AUTO SET FACILITY, INPUT DATA BUFFER, AUTO PAPER LOADING, ENVELOPE PRINTING, 2 YEAR WARRANTY.
234.99
FREE PRINTER LEAD MEMBERSHIP GG9073
INK CARTRIDGE FOR BJ-200 PRINTER GG9139 21.99
PRINTER LEAD (PARALLEL) FOR AMIGA, ATARI ST OR IBM PC GG5147 7.99
RIBBON (COLOUR) FOR CITIZEN SWIFT 9, 24, 200, 224 OR 240C PRINTER GG5637 14.99
RIBBON (COLOUR) FOR STAR LC200 PRINTER GG6680 10.99
RIBBON FOR CITIZEN SWIFT 24, 224 OR 240 PRINTER GG6042 6.99
RIBBON FOR CITIZEN SWIFT 9 OR 120D+ PRINTER GG6041 4.99
RIBBON FOR STAR LC200 PRINTER GG6679 6.99
RIBBON FOR STAR LC24-20 PRINTER GG6681 6.99
DUST COVER FOR 80 COLUMN PRINTER (CLEAR PVC) GG5313 4.99
DISKS, BOXES ETC.
VERBATIM 3.5" DSDD DISK WITH LABEL 10 Pack £7.99
27.99 FOR 50
PACK OF 10 VERBATIM BRANDED 3.5" DSDD DISKS WITH LABELS GG9137 7.99
PACK OF 50 VERBATIM BRANDED 3.5" DSDD DISKS WITH LABELS GG5535 27.99
TDK MF-2DD
TDK MF-2HD
PACK OF10 TDK 3.5" MF-2DD DISKS (DSDD) GG9085 8.99
PACK OF10 TDK 3.5" MF-2HD DISKS (HIGH DENSITY) GG9086 13.99
GoldStar M-2DD
GoldStar M-2HD
PACK OF 20 3.5" GOLDSTAR HD DISKS WITH LABELS GG9118 16.99
PACK OF 10 5.25" GOLDSTAR DSDD DISKS (96 TPI, 720K) GG5265 2.99
PACK OF 10 GOLDSTAR 5.25" HIGH DENSITY DISKS (1.2 MB) GG5266 3.99
DELUXE DISK BOX 3.5" (80), LOCKABLE, DIVIDERS GG5752 10.99
BANX DISK BOX 3.5" (80) STACKABLE GG6591 12.99
DISK BOX 3.5" (10 CAPACITY) GG5187 1.99
DISK BOX 3.5" (120) LOCKABLE, DIVIDERS GG5323 9.99
ALL HARDWARE PRICES INCLUDE VAT & CARRIAGE TO UK MAINLAND
SONY 14" FST COLOUR TV/MONITOR 199.99
SCART TELEVISION
WITH REMOTE CONTROL, MODEL KVM1410U. 60 CHANNEL TUNING, FRONT AV SOCKETS, REAR SCART INPUT, BLACK TRINITRON SCREEN, LOOP AERIAL
FREE SCART LEAD (STATE AMIGA, ST, MEGADRIVE OR SNES) MEMBERSHIP
FOR A FREE 8 PAGE COLOUR CATALOGUE PHONE 0279 600204
We only supply members but you can order as you join. Annual Membership: UK £6.99 EC £8.99 WORLD £10.99
NRG also contains competitions to win ££££s worth of prizes. Currently on offer; An autographed copy of Nigel Mansell's World Championship, 10 Lethal Weapon Videos and Games, Bubsy T-Shirts and pin badges, Sonic Cuddly toys and your chance to design the front cover of NRG!
We sell games and accessories, all at amazing prices, for Megadrive, Master System, Game Gear, Super NES, Gameboy, NES, Lynx, Amiga, Atari ST and IBM PC.
Over 140,000 people have joined Special Reserve, so don't delay, join today! The club with no obligation to buy!
You can phone in your order or use this coupon
Special Reserve Games Club
0279 600204
The Biggest and Best computer games club in the world. Probably.
Join now for £6.99 (UK) and get all this:
Save £££'s on games hundreds of special offers every month
NRG - CLUB MAGAZINE 48 page colour bi-monthly magazine
Over £30 worth of coupons in each issue of NRG to save even more money!
Latest News and Reviews NRG keeps you up-to-date on games and hardware
WIN over £2000 worth of prizes Free to enter competitions in every issue of NRG
Advance Order System Order early. New games sent day of arrival
Credit Card Orders Phone lines open to 8pm Mon-Fri & to 5pm Sat & Sun
No obligation to buy! & all prices include UK Postage and VAT
We only stock official UK products
Inter-Mediates Ltd. Registered Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG. Inevitably, some games may not yet be released. Please phone Sales on 0279 600204 for latest release dates and stock availability. We reserve the right to change prices and offers without prior notification. Please ring for latest information. E.& O.E.
WE ONLY SUPPLY MEMBERS BUT YOU CAN ORDER AS YOU JOIN. THERE IS A SURCHARGE OF 50p PER GAME ON TELEPHONED ORDERS. (PLEASE PRINT IN BLOCK CAPITALS)
TRY
Name
Address
Postcode
Phone
Machine
Enter membership number (if applicable) or Membership £6.99 UK, £8.99 EC, £10.99 World
item
item
item
item
ALL PRICES INCLUDE UK POSTAGE & VAT £
Cheque/P.O./Access/Mastercard/Switch/Visa Switch Issue No
Credit card expiry date
Signature
Cheques payable to: SPECIAL RESERVE P.O. BOX 847, HARLOW, CM21 9PH
Overseas OrdersSurcharge (EC or World): Software orders please add £2.00 per item. Non-software items please add 25%. Hardware items supplied to UK mainland only. Overseas orders must be paid by credit card.
SPECIAL RESERVE • SPECIAL RESERVE • SPECIAL RESERVE • SPECIAL RESERVE

CU AMIGA

CONTENTS



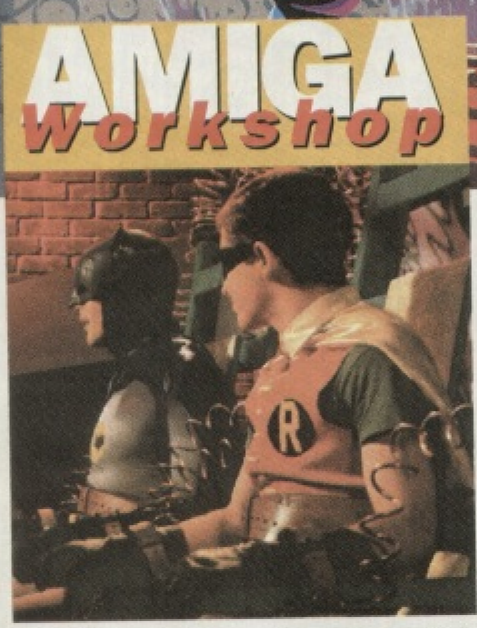
28 THE BRAIN GAME

Even as we sit comfortably reading our magazines, alien intelligences are at work, controlling aspects of our life. What's worse than that is that we don't notice the meddling hands at work. Artificial intelligence isn't some mad SF fantasy of the future, it's all around us even today.

In this month's special feature we look at how your Amiga can be made to simulate the human mind, why anyone would want to do such a thing, and how well they're doing so far.

We'll also be taking a look at some of the artificially intelligent devices you may encounter every day without realising it.

As usual we'll be rounding off with a look at the future – with mad indestructible robots running around the place will your Amiga control your life? Will evolution pass us by? Will anyone notice?



147 AMIGA WORKSHOP

If you're interested in the more serious side of the Amiga, then this is the place for you. Each month our team of experts detail how to get the most out of your machine and the many and varied software packages that exist to help you do just that. This month, in conjunction with our AMOS coverdisk, we've introduced a new series for games programmers to help you get the most from AMOS. Also, there's the next instalments of the *DPaint* and Workbench tutorials. If that isn't enough there's the usual plethora of colourful columns dedicated to Amiga enthusiasts everywhere.

REGULARS

OFF THE CUFF

EDITORIAL



Dan Slingsby – Editor

After much pushing and shoving, we've managed to squeeze both AMOS Compiler and the latest version of AMOS–The Creator onto ONE superlative coverdisk. Don't worry if you're a newcomer to AMOS, though, as we've also got a comprehensive guide that starts on page 14 as well as the first part of an AMOS games tutorial on page 166. And if that isn't enough to satisfy your creative urges, we'll also be publishing a FREE 32-page guide to AMOS next issue which will really help you get to grips with the program. It's sure to be a sell-out.

Inside the mag, you'll find an in-depth preview of Electronic Arts' *Deluxe Music 2*, plus benchtests of the new Retina graphics board, GVP's A1230 accelerator card, Blitz Basic, and a range of A1200 peripherals which will make your mouth drool. The big games in for review include the Amiga conversion of *Desert Strike* and Team 17's *Body Blows*! Plus there's our mag-within-a-mag, Amiga Workshop, which continues our step-by-step guides to some of the Amiga's top programs.

We've lined up some stunning competitions, too! To celebrate Diamond's return to these hallowed pages, we're giving away three A1200 computers with internal 80Mb hard drives. We've also teamed up with Empire Software to offer some truly mouth-watering prizes including a round of golf at the world famous Belfry course and 4x4 Off-road racing at Brands Hatch. Special Reserve have also chipped in with 30 Competition Pro joysticks up for grabs.

There really is something for everybody in this issue of CU Amiga – the magazine that thinks computing should be FUN! See you next month when we'll be giving away ASDG's *The Art Department* plus a huge playable demo of EA's Superstar-rated shoot 'em up, *Desert Strike*.

NEXT ISSUE ON SALE 26TH APRIL

EDITOR Dan Slingsby **DEPUTY EDITOR** Jonathan Sloan **TECHNICAL EDITOR** Nick Veitch **PRODUCTION EDITOR** Heather Turley **STAFF WRITER** Tony Horgan **GROUP ART EDITOR** Gordon Barrick **TECHNICAL ADVISORS** Mat Broomfield & John Kennedy **DISK COMPILER** Kenny Grant **JUNIOR DESIGNER** Jo Winslow **GROUP AD MANAGER** Nigel Taylor **SCANNING** Sara Pruce **AD MANAGER** Sean Collings **SALES EXECUTIVE** Becky White **CLASSIFIED/PRODUCTION ASSISTANT** Esther Rodd **THIS MONTH'S TOP TIP:** Don't do it **MANAGING EDITOR** Steve James **PUBLISHER** Garry Williams

EDITORIAL & ADVERTISING 071-972 6700

CU AMIGA Offices –Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU. Tel: 071 972 6700 FAX: 071 972 6701 *Distribution* – BBC Frontline Ltd, Park House, Park Road, Peterborough PE1 2TR Tel: 0733 555161 *Subscriptions* – PO Box 500, Leicester LE99 0AA *Subs Enquires* – Tel: 0858 - 410510 Order Line (answerphone) 0858 - 410888 *Back Issues* – P.O. Box 500, Leicester, LE99 0AA. Tel: 0858 - 410510. SS 0265 -721X

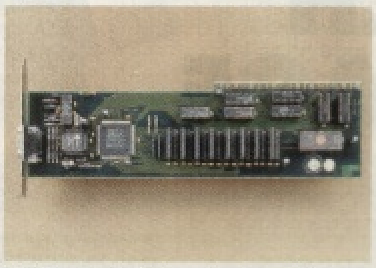
PRINTED IN THE UNITED KINGDOM

ABC 101, 923 Jan-June 1992

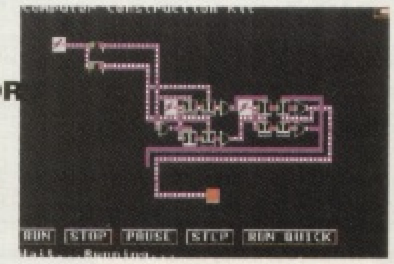
GET SERIOUS

PRODUCTIVITY REVIEWS PRODUCTIVITY REVIEW

The march of progress drives on, and yet again we've got it covered in CU. The A1200 is beginning to be served by some third party manufacturers, and we review their new products on pages 97, 98 and 111. Also, EA are about to release *Deluxe Music Construction Kit 2*, we listen out for the changes on page 108. Plus new Buyer's Guides to Amiga software and peripherals start on page 119.



Is Retina just another colour board for your Amiga or could it be the start of a new graphics revolution? Nick Veitch examines the latest product from those cunning Germans at MacroSystem. Join him on page 88.



Is Basic really dead or is it about to make a dramatic comeback with the excellent new version of Blitz Basic? John Kennedy checks out the antipodean option on page 92.

SCREEN SCENE

GAME REVIEWS GAME REVIEWS GAME REVIEWS

Many long awaited projects finally come to fruition this month. Team 17 have released their challenge to the *Street Fighter* beat 'em up crown – *Body Blows*; while EA have completed their *Desert Strike* conversion, and what a stunner it looks, too. Elsewhere there have been one or two surprises with *Abandoned Places 2* exceeding all expectations, scoring a hefty 87%, and Adventuresoft going it alone with the impressive *Simon the Sorcerer*. Full reviews and previews below.



Two tough fighters slug it out in Team 17's latest thriller. Is this the end for *Street Fighter 2*? Tony Horgan has a bash on Page 54.



Avoiding jokes about enormous choppers, Dan Slingsby reviews a much praised Megadrive conversion. Page 60.

COVERDISKS

Easter is upon us and we're feeling so generous that we've given you an incredible amount of programs on this month's disks. The amazing AMOS Compiler, the original AMOS, plus a couple of sparkling games demos are all here for your delectation

DISK 54 — PAGE 14

AMOS may be the most popular programming language for the Amiga, but that doesn't make it the best. In fact, AMOS is a lot slower than many other languages – but not for long. On this month's super-full disk you'll find the AMOS Compiler, a utility that will speed up your programs dramatically and also make them into executable files, just like real utilities and applications. If you don't already have AMOS, fear not – we've managed to stuff that on the disk as well. What's more, this is a new and fully A1200 compatible version of AMOS, so there'll be no compatibility worries for anything you write or compile with this great package.

If you are new to AMOS you can't afford to miss the first part of our guide, starting on page 166. But now, turn to page 14 and get unpacking those great disks…



DISK 55 — PAGE 23

On our second disk this month you're in for a treat. We've joined forces with two top software houses to bring you fully playable demos of some great games. First up there's *Chuck Rock 2* from Core Design. The plot revolves around Chuck Junior's attempt to save his dad from the nasty Brick Jagger. Guide the stone age kid through the perilous waterfall to reach his objective. Poor Junior must face a whole horde of baddies before he can get to his dad. Still, if he smiles cutely... then bashes their heads in, he might just make it. It's up to you. Second, we kick off with a two minute demo of *FA Premier League* from Ocean. This super soccer sim pits you against a team made up of... well, us. It's action all the way, with easy controls making the game zip along – so, you're in for some real end-to-end play. See you on the pitch.



CU NEWS

CAN ALFRED CHICKEN RULE THE ROOST?

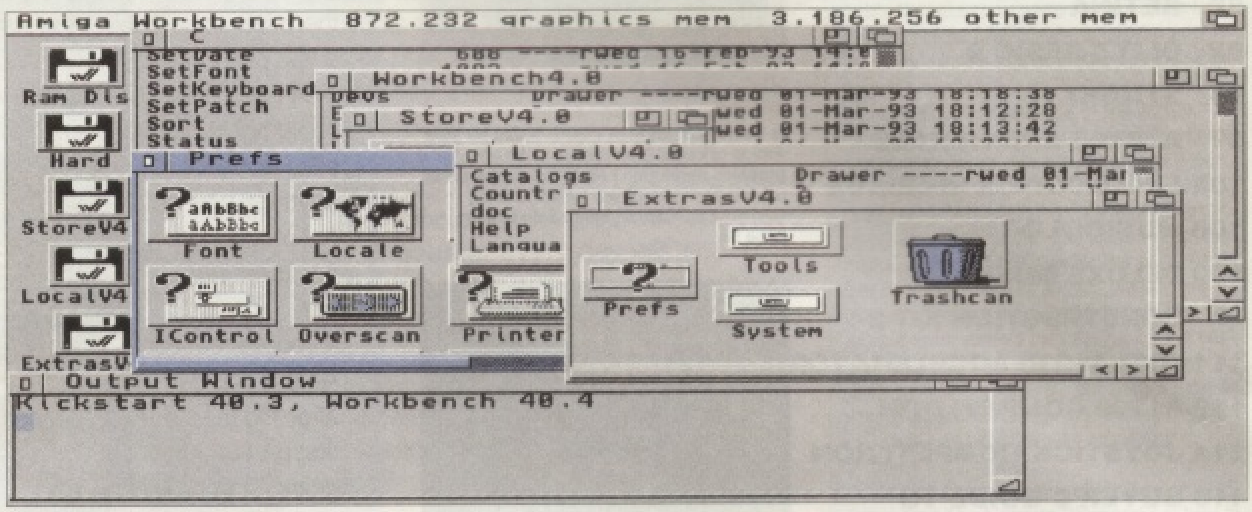
The Gameboy's hottest new star, *Alfred Chicken*, is all set to make his Amiga debut this September thanks to the creative team at Twilight Design. Full of hidden rooms, power ups aplenty and load of slapstick humour, our eponymous hero's debut game is a multi-level platform affair in which Alfred has to rescue his girlfriend from the evil Meka-Chickens. What makes the game stand out from all the rest is the amazing number of animation screens that have been lavished on the Alfred sprite – some of his comic gestures are just amazing. Recognising a good thing when we see it, CU Amiga have already negotiated an exclusive playable demo of the game for later in the year. Watch out for it. In the meantime, ring publishers Mindscape for more info on: 0444 246333.

NEW WORKBENCH REACHES TEST STAGE

New versions of both Kickstart and Workbench have been issued to developers for preliminary testing. Although this is still officially 'Workbench 3', the included files bear version numbers of v40.4 for Workbench and v40.3 for Kickstart.

The updates are of little significance in themselves, as most of the changes are merely minor bug fixes, but the fact that they are being shipped out now could be an important indication of when we are likely to see a new machine released.

The last major testing of Workbench and Kickstart files came shortly before the release last year of the A4000 and A1200 machines. It seems likely that Commodore will have something to say by Easter… Buy the next issue of CU Amiga to find out exactly what!

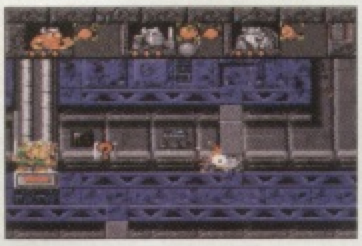


It doesn't look much different from the current Workbench, but it may herald the arrival in a few month's time of a new Amiga.


The guys with the horny heads are about to make an appearance on an Amiga near you. Platform antics, away...

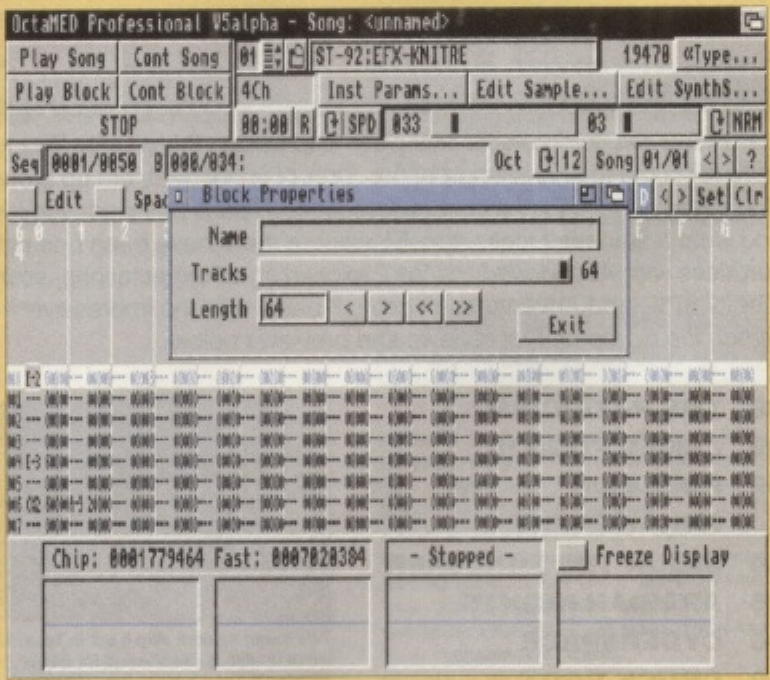
THE LOST VIKINGS

Already a hit on the SNES, Interplay's *The Lost Vikings* is about to hit the Amiga with a crashing thump! Yep, it's back to the days of the Vikings, when men were real men, women were real women and going clubbing meant something entirely different to what it does today. It's a platform game, pure and simple, but with a good dollop of brain-straining puzzles to solve along the way. Featuring some of the tastiest graphics seen in an Amiga game for some time, each of the three main Vikings looks and moves a treat. Taken captive by a bunch of aliens, it's up to you to guide the terrible trio to safety and if that means crushing a few skulls along the way, then so be it. Watch for a full review soon. Interplay's number: 0865 390029.



OCTAMED PRO 5.0

From the utter obscurity of its early days, *OctaMED* has risen to a position of respect that many full price programs never achieve. We were fortunate enough to purchase the rights to put version 3.0 on our coverdisk last year, and apart from a minor upgrade in version 4.0, there has been little revision to the program since then. Now CU Amiga brings you an exclusive peek at version 5.0, a program which promises to be a total rewrite rather than just another update.



This is made immediately apparent by the fact that the program only works on Amigas running a 2.0 operating system or higher. If this fact manages to get by you, then one glance at the program will be enough to bring you around for everything has changed.

Teijo (*OctaMED's* author) has clearly had a major rethink about the layout of the program. The existing layout is fine, but suffers from two major problems: 1. It doesn't use intuition at all, and 2. There's no room for expansion. If Teijo comes up with new features, there's no space for them on the screen!

Both problems have been completely overcome and all options that were previously accessed via buttons (such as FILES, SLIST, SYNTH, etc.) have now been tucked into menus at the top of the screen.

Although in this early version most options aren't yet working, the maximum number of simultaneous tracks has been increased from 16 to 64, which means that you can now use your MIDI instruments more effectively. The commonly used options are now permanently on-screen, filling the area where the buttons used to be. There's also what seems to be a time signature gadget. All of the old options appear to be present, although finding them among the maze of gadgets and menus is another matter entirely!

I'm certain that the new layout is a major improvement, but boy it's going to take some getting used to. All it needs now is MIDI file import and export, and support for triplets and quintuplets and it'll be even better. Let's just wait and see… In the meantime, for more info contact Amiganuts United, 12 Hinkler Road, Thornhill, Southampton.

A1200 BREAKS ALL RECORDS


There ain't no stoppin' us now. The A1200 breaks all records. If ever confirmation were needed that this is the machine of the future this is it.

It looks like there's no stopping Commodore's new wonder machine as the 32-bit A1200 has now sold more than 100,000 units since its launch. Having passed the 50,000 barrier by early January, many high street shops have subsequently sold out of their entire stock as magazine reviews heaped praise on the machine. With Atari announcing a price hike in the cost of an entry level Falcon from £499 to an incredibly steep £599, Commodore must be laughing all the way to the bank. Could this be the year when home computers fight back against the consoles?! To find out more about the A1200 ring Commodore on 0628 770088.

EMULATORS WITH EVERYTHING

An interesting new emulator package has been announced by Blittersoft. Presently a hardware and software combination for the A1500, A2000, A3000 and A4000 (with an A1200 version due soon), the Emplant is an emulator with a difference. Rather than being limited to emulating one particular system, it has been designed to act as any number of different computers. Operating in a multi-tasking environment, it's shipped with Mac II/IIx/IIcx emulation. Further modules can then be obtained to allow emulation of the Mac IIsi/ci, Mac Quadra, PC 386/486, Atari Mega ST, Atari Falcon, Commodore 64/128, and Sega and Nintendo consoles (whether Master System, Megadrive, NES or SNES is not yet specified).

At least 2Mb of Fast RAM is required (3Mb if using MAC System 7), and a 68030 or '040 processor with MMU and FPU to get it running at full speed. Support for the 68000, '010 and '020 processors will follow.

Contact Blittersoft on 0908 368071.

GENESIA

Looking and sounding like a combination of *Populous 2* and *Powermonger* comes this new release from French outfit, Microids. Obviously owing more than a doff of the hat to Bullfrog's two best-sellers, *Genesia* puts you in charge of a small army which must be used to expand your empire and develop new methods of mass destruction. Your people have various skills which must be harnessed if you're to achieve your worldly ambitions, and they're a finicky lot so it's best to keep them sweet. Neighbouring districts are also a problem; should you trade with them or send in your army and crush them beneath your steel boot?! It's a game of strategy and skill, topped off with some gorgeous looking graphics and a number of novel twists to the standard god sim game. Watch out for a preview soon. If you'd like more info, give Daze Marketing a ring on 071 328 2762.


At first glance it all looks very familiar, but we've been promised something very different.

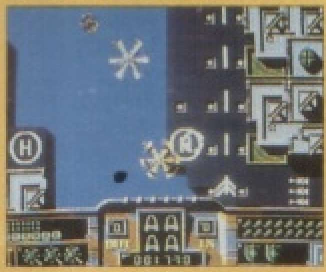
INTERNATIONAL OPEN CHAMPIONSHIP GOLF

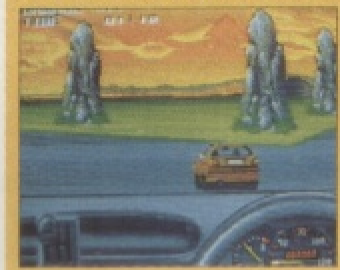


Getting into the swing of things, Ocean have announced not one, but two new golf games for the coming season. First onto the fairways will be *International Open Championship Golf* which will feature three imaginary courses. A special A1200 version will be the first to be released, with an A500/A600 game planned for later in the year. The development team behind the game, The Really Interesting Software Company, have developed a novel playing method which uses a targetting system to decide the ball's trajectory. Once you've selected the appropriate club and chosen the strength of shot you wish to apply, it's then a case of placing a target marker over the ball and jabbing the fire button. Depending on where the ball is hit, you'll either pull off a perfect shot or slice, hook or top the ball. The team are also working on a special Ryder Cup license for Ocean, but this one won't appear until Christmas. More news soon.

GAME MUTTERINGS

Remember *Smash TV*, the futuristic shoot 'em up where you got to win free videos and toasters depending on how many opponents you managed to maim?! Well, it looks like we're going to get the opportunity to do it all over again, as the coin-op's sequel, *Total Carnage* has been signed up by ICE, the software house who've brought you *Fireforce* and *Abandoned Places 2* in recent months. This time the action switches to the Middle East and instead of free VCRs and sports cars you're awarded military medals each time you take out a strategic target. More info from ICE on 0453 756993. • Before *Desert Strike* there was *Firehawk*. That's right, the Codemasters' NES hit of the same name is being converted to the Amiga and looks likely to touch down very shortly. With air, land and sea scenarios, the fast-paced strategic shoot 'em up features an awesome array of weapons with which to blast your enemies from the sky. Codemasters can be contacted on 0926 814 132. • Death Race 2000 has got nothing on Ocean's latest race game. Provisionally entitled *Hot Hatches*, the action takes place at a number of illegal races in both Europe and America. There are no rules, so anything goes, and the first past the finishing line grabs the lion's share of the prize money. After each race, it will be possible to upgrade your car and add on extra bits of kit such as turbochargers, different tyres and wheels, superchargers, suspension racks and three nitrous exhausts. Sounds like fun! More details on 061 832 6633. • Fans of strategy master, Doctor Peter Turcan, might be interested in a new collection of his games. On-Line have snapped up the rights to *Waterloo*, *Borodino* and *Austerlitz* and crammed all three into one pack. Featuring Turcan's award-winning battle system and some amazing 3D graphics, *Napoleonics* gives you the chance to feel what it would have been like to take charge of one of the world's largest armies. Priced at £34.99, expect to see it in the shops by late April. For more info, call On-Line on 081 558 6114.


More death and mayhem from the air as *Firehawk* comes to the Amiga. Shoot 'em up action galore.


In these times of high car theft figures, you'd have thought that Ocean could have been a little more diplomatic than to call it *Hot Hatches*!

NEW SCALA INFOCHANNEL

Scala, widely regarded as the best multi-media presentation package around, has just received another update. *Scala InfoChannel IC400* is used by professionals around the world for many applications, including video production, public information systems and business presentations. The software now has 15 typefaces, text effects such as drop shadows and 3D-look, 60 backgrounds, 40 pre-defined palettes, a library of 80 logos and symbols (you can also include your own), and over 80 wipes. As it can accept and act upon information from a modem, an Amiga running *Scala* can be remote controlled from anywhere in the world.

The new AGA resolutions are now supported. Standard ANIM files can be replayed, as can IFF and 8SVX samples. Now there's even support for Soundtracker, SMUS and DSS modules. The recommended system is an Amiga with 3Mb of RAM (at least 1Mb of which must be Chip RAM), a hard drive and either the ECS or AGA chip set. More memory and an accelerator are advisable. *Scala* also requires Workbench 2.04 or higher. Contact Scala UK on 0920 444294.

MITSUBISHI PCMCIA SRAM

They're the next big thing – they're removable battery-backed RAM cards. Mitsubishi have just announced their latest 4Mb PCMCIA card. Conforming to the PCMCIA II standard, it's a 68 pin card with a write protect tab, which acts just like the write protect tab on a 3.5 inch floppy disk. Now you can have the flexibility of a floppy with the storage capacity of a hard drive. For further information contact Mitsubishi on 0707 276 100.



Hurrah! Another super-slim credit card add-on for the A600/A1200. Unfortunately there is still no sign of a modem or hard-drive yet...

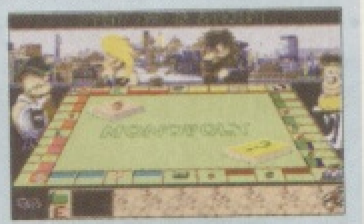
OFFICIAL 1200 HARD DRIVES

Official third party hard drives are now available for the A1200. ZCL are offering two systems to owners of the A1200, neither of which will invalidate the machine's warranty. ZCL will install an HD60 60Mb drive for £219.99, and an HD80 80Mb drive for £279.99.

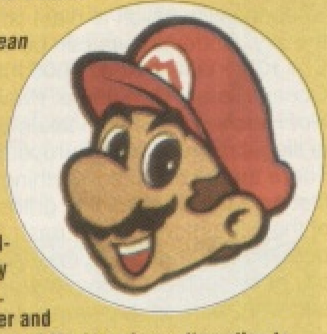
They're also offering complete A1200s with drives pre-fitted, priced at £539.99 for the 60Mb version and £599.99 for the 80Mb model. Contact ZCL on 0543 414817.

BOARD OR BORING?

Two classic board games come to the Amiga soon. The first is US Gold's conversion of *Scrabble*, probably the world's most infuriating word game if you're as bad at wordplay as wot we are! Fortunately, there will be 12 skill levels to choose from, so all abilities will be catered for – even Jon's! You can choose to play the computer one-to-one or hold a tournament match against three other players. But no cheating, as the programmers have included every page of the Chambers Official Scrabble Dictionary (which includes over 126,000 words). A new version of *Monopoly* is also in development, by the team that programmed the original Leisure Genius edition. Enhancements to the 1985 version include animated cartoon characters who appear at the side of the board offering encouragement or not as the case may be. Watch out for it in early April. For more information about *Scrabble*, ring US Gold on 021 625 3388. For more info about *Monopoly*, ring Supervision on 071 702 9391.



MARIO IS MISSING



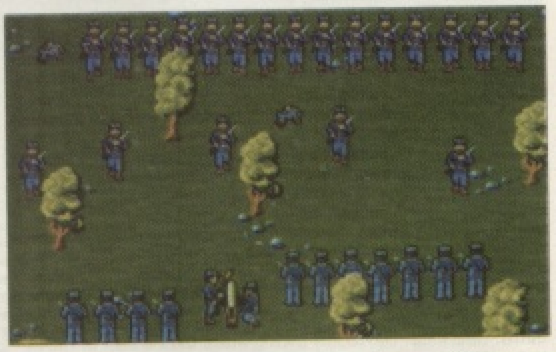
And you know where he's ended up? Yep, the Italian Stallion [*don't you mean plumber? – Ed*] is about to make his Amiga debut. Unfortunately, it's not in a typical Mario platform affair, but in a series of 'edutainment' products to be released by US label, Mindscape. Arch-enemies, Bowser and theKoopas, have captured Mario and are attempting to steal most of the world's famous treasures. Taking the part of Luigi, Mario's brother, it's up to you to use your wits and beat the Koopas as you follow them through time. There are more than 19 different cities to visit in the game, and each missing treasure must be returned to its original home. Oh yeah, and that Mario geezer has to be rescued, too! Expect *Mario Is Missing* to be released in late April. More details from Mindcsape on 0444 246333.

PRINTER RIBBONS

Pragma have launched a couple of new printer ribbons that claim to eliminate smearing and smudges, reduce mechanism wear and give extended use at even 1,200 lines per minute. The Printronix Premium Text and Premium Bar Code ribbons are compatible with most popular matrix line printer systems. The elimination of smudging is due to a new type of quick-drying ink. There's also a serrated reversing patch to reduce the risk of ribbon breakage and minimise operator interventions. Contact Pragma on 0923 853411.

THE BLUE AND THE GREY

The bloody confrontations of the American Civil War are to be re-enacted in the latest computer wargame from strategy specialists, Impressions. Edward Grabowski's *The Blue & The Grey* features real-time animated combat, an easy-to-use point'n'click control system and all the usual options such as army composition, deployment, recruitment and training. There will even be a specially commissioned book about the Civil War included with each copy of the game. The war is refought over a map stretching from the mid-West to the East Coast and from Florida up to New York. There will also be a series of data disks released that will re-enact famous battles, such as those at Gettysburg. There's no release date yet, but pencil it in for mid-summer. Impressions can be reached on 071 351 2133.



Take the role of General Lee and decimate the opposition in Impressions' latest strategy title.

PANASONIC COLOUR THERMAL PRINTER

New from Panasonic is the EPL 8543 high resolution thermal colour printer. With a resolution of 203 DPI, it's capable of outputting 4096 colours, using a maximum of a 2x2 dot dither pattern. It comes with 3 Mbs RAM as standard, enough for one complete colour pass. Panasonic estimate that output costs around 50 pence per page. The EPL 8543 retails at £4495.00. For further details, contact Panasonic on 0344 853913.



At last, high res affordable thermal colour printing

PUTTING THE RECORD STRAIGHT

- There were a few gremlins in the works last issue, so we thought we'd better put the record straight. No, *Kid Pix* does not cost a whopping great £299, as we stated in our review. In fact, the asking price for this easy-to-use paint'n'create package is a much more modest £25.99. For further info, ring Electronic Arts on 0753 549442.
- Another point of confusion surrounded our review of *Lemmings 2*. Yes, there is a hard disk installable version of the game, but its release has been held back. Expect it soon – if you want to find out exactly when, Psygnosis, the game's publishers, can be contacted on 051 709 5755.
- After reading our review of *A-Train*, Manchester-based Ocean Software have decided to scrap their plans for a hard drive-only version of the game, and will now release the train sim so it can be loaded directly from floppy. Hurrah. Expect the game to appear towards the end of April. Ocean's number: 061 832 6633

MIGRAPH OCR JUNIOR

The optical character recognition program Migraph OCR has spawned a cheaper Junior version. Like its parent, Migraph OCR Jr can read printed type via a scanner such as the AlfaData, Golden Image or Migraph units. Once a document has been scanned, it can be saved out as an ASCII file. The new version is now compatible with the AGA chip set.

Version 3.0 of *Touch-up*, Migraph's scanning and editing software has also been written for AGA compatibility. The zoom and rotation functions have been accelerated, the greyscale conversion has been improved, and it's got a Workbench 2 look even on 1.3 machines. It also works with Migraph's PS-400 Wand. For further information, contact DMI on 0753 686000.

00
S
ailable for
to owners
ate the
060 60Mb
ve for

s with
60Mb
Contact

IG?
on. The
ably the
s bad at
be 12
be

of the
ncludes
ly is also
the origi-
he 1985
ho appear
t or not as
For more
21 625
ervision

sition in

IIOR
Migraph
on. Like

aData,
ocument
an ASCII
ith the

anning
n for AGA
ions
version
nch 2
with
mation,

D

VAT

ES

the fastest Hard
es Game Switch,
SI Driver, GVP's
nsion up to 8 meg!
s QUANTUM Hard

...£299.99
...£379.99
...£469.99
...£564.99
...£179.99

d...£122.99
d...£284.99
d...£329.99
rd...£406.99
d...£544.99
9 per Mb.

ES

tors & Hard
n product for

...£657.99
...£749.99
...£844.99
e...£929.99
...£219.99

...£474.99
...£757.99
...£1136.99
...£1419.99

...£65.99
...£182.99

S

a FREE cable
Amiga.
£224.99
cluding 'Lotus
-site warranty.
£199.99
with built in Tilt
£394.99

...£4.99
...£13.99
...£19.99
...£12.99

OM

the dawn of
A500+ /A570.
£299.99

PRINTERS

PHOENIX PRINTER PACK
Supplied with ALL printers containing 1.8m std. printer cable, printer ribbons/cartridge and 250 sheets of paper absolutely FREE

star star star

LC-100 Colour NEW! £164.99
9 PIN colour printer with paper parking, eight fonts and electronic DIP switches.
LC24-100 NEW! £189.99
24 PIN with compressed data mode, 16 K buffer and 10 letter quality fonts(with Star printer driver only).
LC-20 £132.99
LC-200 Colour £199.99
LC24-20 £199.99
LC24-200 Mono £219.99
LC24-200 Colour £279.99
XB24-200 Colour £379.99
SJ48 Bubblejet NOW ONLY £219.99
Star printers come with one year warranty.

CITIZEN CITIZEN CITIZEN

Swift 240 Colour £264.99
Swift 240 Mono £254.99
Swift 200 Colour £214.99
Swift 200 Mono £187.99
Swift 9 Colour £169.99
Citizen printers come with 2 year warranty.

HEWLETT PACKARD HEWLETT PACKARD

Deskjet-550C (color printer) NEW! £534.99
300 dpi laser quality output • sharp blacks and 16 million colours available • six built in type faces-4 scalable • improved media handling • several paper sizes • FOUR TIMES FASTER than previous H.P. Deskjet range.
Deskjet 500 £329.99
Deskjet-500 Colour £424.99
HP printers come with 3 year warranty.
HP black ink cartridge £24.99
HP colour ink cartridge £29.99

AUTO SHEET FEEDERS

STAR LC20 £57.99
STAR LC200 £59.99
STAR LC24-200 £62.99
STAR LC24-20 £62.99

LASER PRINTERS

STAR LASER JET MK III £724.99
STAR LS-5 PHOENIX PRICE £599.99
5 Pages per minute< 1 years on site maintenance warranty and 14 resident fonts
STAR LS-5EX £734.99
5 Pages per minute< 1 years on site maintenance warranty enhanced control logic board 14 resident fonts (eight scalable).
STAR LS-5TT £954.99
As above but with 35 postscript fonts and 2Mb of memory (expandable to eight.

BUBBLE JET

Canon Canon

CANON BJ 10eX £209.99
Upgraded version of BJ10e, the worlds biggest selling portable inkjet printer.
CANON BJ 20 £319.99
More Features than the BJ10, includes Auto sheet feeder. Top selling-Highly Recommended
CANON BJ 200 NEW! £349.99
Feature include: 300 dpi. • Min 80 page Auto sheet feeder • minimum 3 pages per minute SUPER VALUE!
CANON BJ 300 £374.99
80 column bubblejet provides laser quality output.
CANON BJ 330 £499.99
136 column bubblejet.
CANON Bubblejet cartridges £17.99
BJ 10eX Autosheet feeder £49.99

PRINTER ACCESSORIES

We have a large range of **high quality** printer accessories for all the printers we sell including: **dust covers from** £2.99 • **Ink cartridges from** £13.99 • **Mono ribbons from** £3.50 • **Colour ribbons from** £7.99 • **Printer stands from** £7.99

MICE & TRACKBALLS

Roctec Mouse £13.99
GOLDEN IMAGE
Mega Mouse £12.99
(Has just received 90% Amiga Format Gold Award)
Optical Mouse £29.99
High precision, pointing device.
Crystal Trackball £37.99
Infrared-Cordless-Mouse £47.99
(Rechargeable top selling innovation.)
Optical Pen Mouse £39.99
High Quality 8mm mouse Mats £3.99
Auto Mouse/Joystick Switch £15.99
Don't damage your Amiga's ports! This device saves wear and tear makes switchover ***FAST,*** and does **NOT** require power unlike many others.

SCANNERS

Powerful image processing tools for the office or the home environment.

POWER–Features include: 100-400 dpi • 64-Greyscales Thruport to printer • FREE Editing software.
Power Scanner v3.0.. NEW! £109.99
Includes FREE upgraded editing software.
Power Scanner Colour £234.99
GOLDEN IMAGE–Hand Scanner Series
Features: 400 dpi • 256-Greyscale • Touch up and Merge it software.
AlfaScan £124.99
AlfaScan Plus £149.99
AlfaScan OCR (Inc OCR Software) £279.99

AMIGA MUSIC

Technoturbo-Sound.... NEW! £29.99
Stereo Sampler £29.99
Combines ease of use with state of the art analogue to digital conversion technology.(inc. FREE sample editing software +audio lead)
Pro-Midi 2 Interface £24.99
This fully featured professional quality midi interface is very flexible giving semi-patch bay facilities. It has five ports in, out, thru and two switchable out/thru. (inc. FREE midi lead)
GVP Digital Sound Studio £44.99
High quality sound sampler for all Amiga Computers
Amiga Music Made Easy-Only from Phoenix!

ACCESSORIES

Control Centre £34.99
Heavy duty construction,rubber edging, perfect colour match, makes an ideal workstation for the A500/A500+ **A 600 control centre now available.**
Phoenix Stereo speakers.. NEW! £37.99
Superb sound and excellent dynamics. These two-way stereo Hi-Fi speakers are an Amiga standard-**Excellent companions on any gaming soiree!**
DATA SWITCHES–(25 pin D type)
2 way £15.99
3 way £17.99
4 way £19.99
STORAGE:
90 Capacity BANX £11.99
150 Capacity POSSO £16.99
Disk Box 10 Cap £1.99
Disk Box 25 Cap £2.99
Disk Box 50 Cap £4.99
Disk Box 100 Cap £6.99

AMIGA RELEASE 2

The popular upgrade kit for 1.2 / 1.3 owners from Commodore is in stock and selling fast! PHOENIX PRICE £79.99

Workbench 2.1 Enhancer Kit with ROM POA
Workbench 2.1 Enhancer Kit (Software Only) POA
Call for lowest Prices in the UK!
PHOENIX ROM SHARERS
Keyboard ROM Sharer £29.99
Standard ROM Sharer £24.99
Rev 3.5 ROM Sharer £27.99
1.3 ROM £27.99
2.0 ROM £34.99

DISKS

Don't confuse these quality disks with others currently available. 3.5" 100% certified error free 70% clip. All disks include FREE high quality Phoenix labels.

10	£4.99	200	£72.99
25	£12.99	500	£174.99
50	£22.99	750	£259.99
100	£39.99	1000	£339.99

Dysan Branded disks– High performance media from the experts-box 10 with labels and FREE 10 Cap plastic storage box

10	£5.99	100	£52.99
50	£26.99	500	£249.99

1000 Phoenix Disk Labels £9.99

DISK DRIVES

All drives feature super slim design, enable-disable switch, thru port and come with a 1 year replacement guarantee!
Phoenix Deluxe Drive £49.99
Roctec Roclite NEW! £64.99
This famous drive has now been upgraded to include Anticlick and Virus Checker
Disk head cleaner £3.99

LEADS & CABLES

Midi-Midi 2m	£3.99	Modulator ext	£9.99
Midi-Midi 3m	£4.99	Amiga-Scart	£9.99
Midi-Midi 5m	£5.99	Amiga-8833MkII	£9.99
Disk Drive ext	£9.99	Joystick long ext	£4.99

Mouse/Joystick ext £4.99
Mouse/Joystick splitter £4.99
***Serial/Modem cables** £9.99
***Amiga-Multisync** from £9.99
***Amiga-Microvitec** £9.99
***Amiga-CPC monitor** £9.99
***Amiga-RGB/TV** £9.99
***SCSI Cable various** £9.99

Printer 1.8m £5.99 **Printer 2.0m HQ** £7.99

MULTI-MEDIA

Rombo's Vidi Amiga 12 is the replacement for their complete colour solution bringing you the world's first mass market colour digitiser for **under £100**.Outstanding features and plenty of **VFM**!-*(Value for money!)*-Highly Recomended. PHOENIX PRICE £79.99

ROCGEN Plus £129.99
Quality features and performance-Recommended.

SOFTWARE

NEW TITLES..STOP PRESS..NEW TITLES

Page Setter V3 NEW! £39.99
Art Expression £139.99
Clarity 16 £107.99
Video Master £52.99
Pagestream Business Forms £29.99
Morph Plus £149.99
Image master £129.99
Big Alternative Scroller v2.0 £59.99
Amiback v2.0 £42.99
Techno Sound Turbo £29.99
System 3E £48.99
Deluxe Paint 4.5 (AGA for 1200) £64.99
Hotlines v1.1 £62.99

WORD PROCESSING / DTP

Kindwords 3 £36.99
Final Copy 2 £69.99
Final copy soft fonts now available POA
Professional Page 3 £129.99
Pagestream v2.2 £126.99
Pagestream Font pack 1 £44.99
Pen Pal 1.4 SPECIAL OFFER £39.99
Hot Links £52.99
Wordworth V 2.0 NEW! £72.99
now includes 17 Compugraphic fonts!

INTEGRATED PACKAGES

Gold Disc Office 2 £59.99
Mini Office NEW! £39.99

UTILITIES

Lattice 'C' V6 £214.99
A-Talk 3 £44.99
Cross Dos V5 (inc. Cross PC Emulator) £29.99
Diskmaster 2 £43.99
Dos 2 Dos £29.99
Opus Directory V4.0 £49.99
Xcopy £36.99
Quarter Back £45.99
Quarter Back Tools Vs 5 £49.99

DATABASE

Superbase Pro 4 £164.99
Superbase Pers 2 NOW ONLY £39.99

PRESENTATION & SLIDE SHOW

Art Department Pro Conv. Kit £57.99
Can Do It V.I.G £94.99
Hyper Book £44.99

CAD & DRAWING

Professional Draw 3 SPECIAL OFFER £79.99
Intro CAD Plus £74.99
X CAD 2000 £99.99
X CAD 3000 £269.99

VIDEO PRODUCTION/TITLING

SCALA 500 £79.99
SCALA Professional £219.99
Big Alternative Scroller £35.99
Broadcast Titler 2 £179.99
Font Pack 1 for Broadcast Titler 2 £80.99
Font Enhancer for Broadcast Titler 2 £88.99
TV Show Pro £51.99
TV Text Pro £84.99

ACCOUNTING

Personal Finance NEW! £29.99
Arena Accounts £83.99

HOW TO FIND US!

Well Worth a Visit!



OPEN 7 Days
Mon.-Sat. 9.30am-6.00pm Sun. 11.00am-3.00pm
Thurs 'late till eight'

COVERDISK 54



If you're new to programming and want to get your Amiga to do exactly what you want it to do but don't know how, then you've come to the right place. On this month's coverdisk, in conjunction with Europress Software we bring you both AMOS and the brilliant AMOS compiler! Read on for more...

IF YOUR DISK WON'T LOAD

If your coverdisk doesn't seem to work as it should, then follow this simple guideline. Firstly, remove all unnecessary peripherals, such as printers, modems etc. Follow the instructions on these pages to the letter, and if after that you find that the disk still doesn't work, then pop it in an envelope with a covering letter explaining what the problem is to: CU DISK RETURNS, PC WISE, DOWLAIS TOP BUSINESS PARK, MERTHYR TYDFIL, MID-GLAMORGAN, CF46 2YY. Please include 28 pence per disk to cover postage and packing (55 pence for overseas readers). Your disk will be tested and a new, working one dispatched to you as soon as possible.

If your problem is a little more urgent, then call the PC Wise hotline for advice on 0685 350505. The line is open between 1030 and 1230 Monday to Friday. Please note that neither we nor PC Wise accept responsibility for any disks damaged due to negligence on the part of the user.

AMOS

Welcome to AMOS! Just in case you don't know, it's one of the best-selling Amiga utilities of all time, second only to EA's *Deluxe Paint* series. A development from BASIC, AMOS is a programming language that is easy enough for the beginner to understand, yet comprehensive enough for you to be able to create the programs you want with the minimum of fuss.

If you've ever programmed in BASIC, you'll have no trouble at all getting into AMOS. Just skim through the rest of these instructions and you'll be ready to go. If you've never touched a programming language before, then there's no better place to start.

Before continuing here, unpack and load up AMOS (see the Quick Start Guide opposite for further details). You'll then be faced with the main editor screen. Along the top of the screen are 10 buttons marked 'Run', 'Test' etc, with an information line directly beneath that, and the main edit window directly below that. This is where the programming takes place.

EDITOR VS DIRECT

When the main edit screen is showing, you are in edit mode. Anything you type here is entered into your program, with none of the commands you type taking effect until you run the program. There is another mode to work in, called direct mode, in which the commands you type are effective immediately. To switch between the two, press the escape key. Pressing it now takes you into direct mode, which shows you a small edit window, just like a CLI box, and a blank screen. The blank screen is the current work screen, and all commands affect this area. To see the difference between these modes, return to Edit mode and enter the following line:

Print "Hi There"

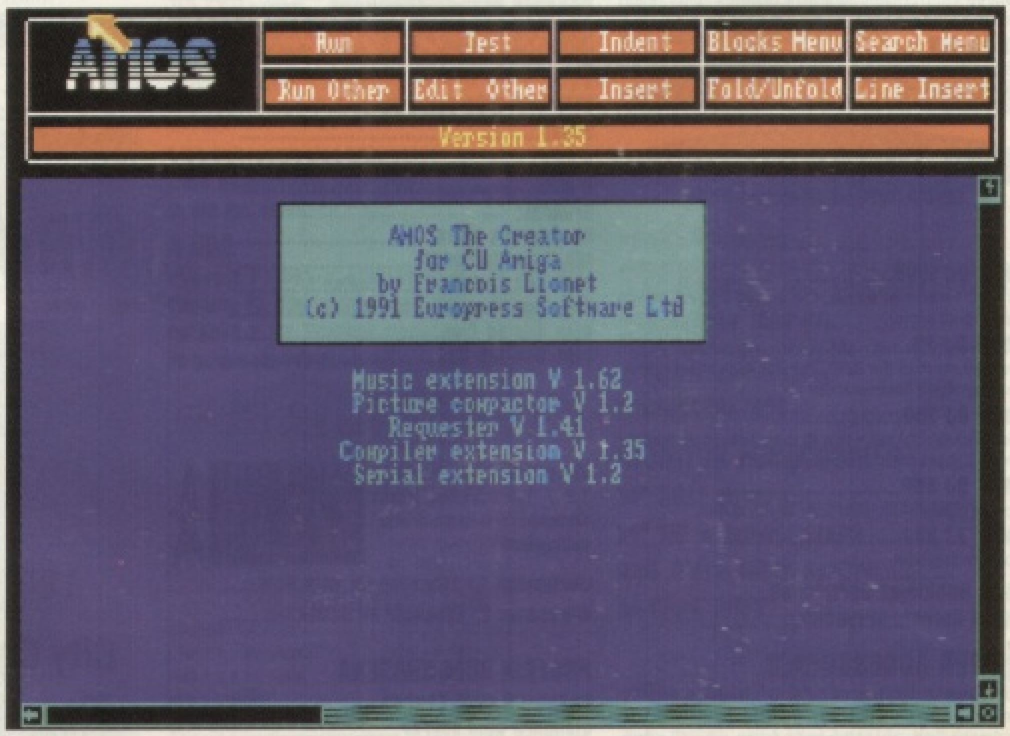
As you can see, nothing happens. Now press Escape to enter direct mode and type the same line. This time the words 'Hi There' appear in the top left corner of the screen. To get the instruction you typed in edit mode to function, you need to run the program. Return to Edit mode and move the mouse pointer to the word 'Run' at the top of the menu bar, or press F1. After a short pause, the screen blanks, and the words 'Hi There' appear. If you're wondering why it's written twice, it's because the first line was already placed using Direct mode, and you haven't cleared the screen since. To clear the screen, move the cursor to the start of your program in Edit mode, using either the mouse pointer or the cursor keys and press return. This creates a blank line in the listing. Now type:

CLS (Return)

Run the program again, and you'll see that the CLS (CLear Screen) command has wiped the slate before PRINTing your text. Looks easy so far, doesn't it?

THE MENU BAR

Before we really get into some programming, let's take a moment to look over the menu bar. As you



The main AMOS edit screen, with the menu bar at the top, and the main edit area filling the rest of the screen.

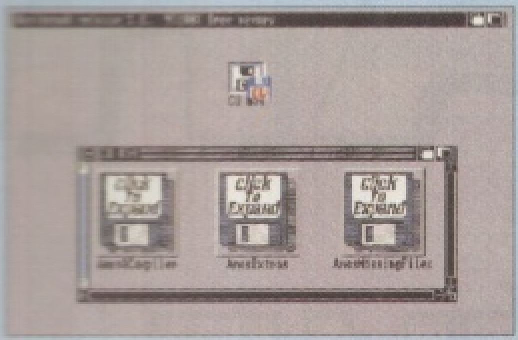
YOUR QUICKSTART GUIDE TO LOADING DISK 54

WRITE PROTECT YOUR COVERDISK!

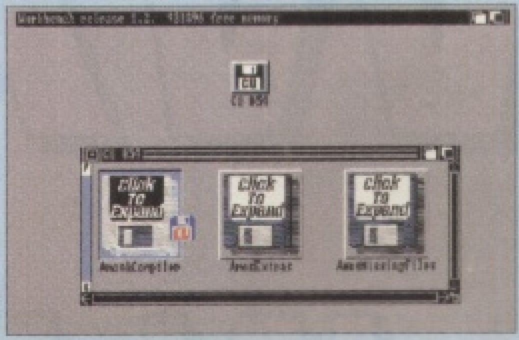
Before you do anything, make sure your Coverdisk 54 is write protected. To do this, open the small black tab on the corner, so that you can see through the hole. This will stop you decompacting the disk onto itself.

Coverdisk 54 is actually three disks in one, all compressed down as far as they can go. Before you can load any of them, they need to be decompacted, so the first things you'll need are three formatted floppy disks.

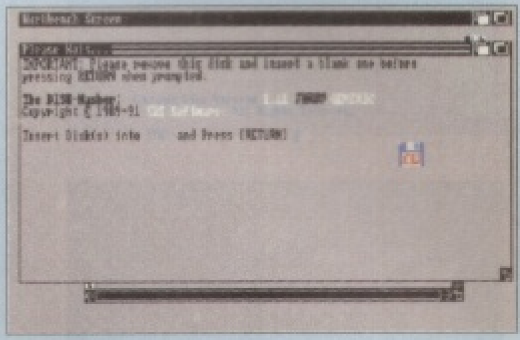
Switch off your machine for at least 10 seconds and then switch it back on. Stick your CU coverdisk in the drive, and wait for the drive light to go out. After a few seconds you'll be faced with the familiar CU disk icon.



1 Double-click on the CU 54 icon to open the directory. A window will appear with three similar looking icons, AMOS + COMPILER, AMOS EXTRAS and AMOS MISSING.



2 Double-click on the first of these icons, AMOS + COMPILER, and wait for the Disk Masher program to load. At this point you'll be prompted to insert your blank disk. Remove the CU coverdisk and insert your first disk. Now just press return and wait for the program to write itself onto the disk. Re-insert the CU coverdisk when prompted and label your new disk 'AMOS Program Disk'.



3 Carry out the same sequence with the other two icons on the disk (double-clicking, insert a new blank disk when prompted), remembering to label the disks when they have been written. When all is done, remove the CU coverdisk and switch off the machine for 10 seconds. Put your AMOS Program disk in the internal drive and switch on!

can see, there are 10 commands just waiting to be clicked, from 'Run' which runs the program, to 'Line Insert', which creates a blank line in the listing, just like hitting return. Now, if you press the shift key, the system menu appears. These 10 new commands are used for system management and control the loading and saving of programs and accessories. Accessories are the add-on modules which expand the capabilities of AMOS. You might have noticed the list when AMOS booted up, showing you the various system files. These are all accessories.

Holding down the control key brings up another menu, this time the Blocks menu, which is used for editing chunks of the program, just like a word processor. If you want to move a large block of the program from one point of the listing to another, you simply specify the start and end points of the block, which is then highlighted, and 'Cut' it. Move the cursor to where you want the block to be placed, and 'Paste' the block down.

The last menu is the Search menu, revealed by holding down the Alt key. This menu is used to locate words and phrases in much the same way as using find and replace on any word processor.

All of the menu items can be used by holding down the appropriate function key. Keys F1 to F5 select the top row and F6 to F10 select the bottom.

YOUR FIRST COMMANDS

You've already used two of AMOS's 500 plus commands (PRINT and CLS), so now we're going to use some more. Let's say you wanted to write a program that asked you for your name and then printed it all over the screen in a multitude of colours. The first thing you would need to do is get the computer to ask you your name, and for this we use the command INPUT, like this:

```
CLS
PRINT "WHAT IS YOUR NAME?"
INPUT name$
```

INPUT tells the computer to ask the user to type something. Name$ is a variable, a pigeonhole used to store information. If you imagine that inside the Amiga there are lots of little labelled shoeboxes, the line INPUT name$ is telling it to get the words typed in by the user and put them in the shoe box marked Name$. Now, if you ask the Amiga to print the contents of the box, all you need to do is type:

```
PRINT name$
```

Try it to see how it works. Run the program a couple of times to see how you can put any name into Name$. Variables can be called anything you like, with one or two minor rules. If the variable is to hold text – to be a string – then it must have a dollar sign at the end. Anything else will make the computer look for a number instead, leaving you with an error message when you try to enter your name.

Delete the PRINT line we just entered by putting the cursor at the end of it and pressing the delete key until it is all gone, then try the lines shown in Table 1.

Now run the program. Not a bad effect for three minutes work, is it? Before you start to worry, though, let's take a look through that listing. The first thing you'll come across is the FOR A=1 TO 100 instruction. This is part of program structuring, and merely tells the program to repeat the segment between this instruction and the NEXT A instruction a certain amount of times. It's a lot easier than writing out the same set of instructions over and over again. The letter A is another variable, and again could be called anything.

The RND() command tells the computer to

Direct mode is a way of checking how certain commands will work before you put them into the listing.

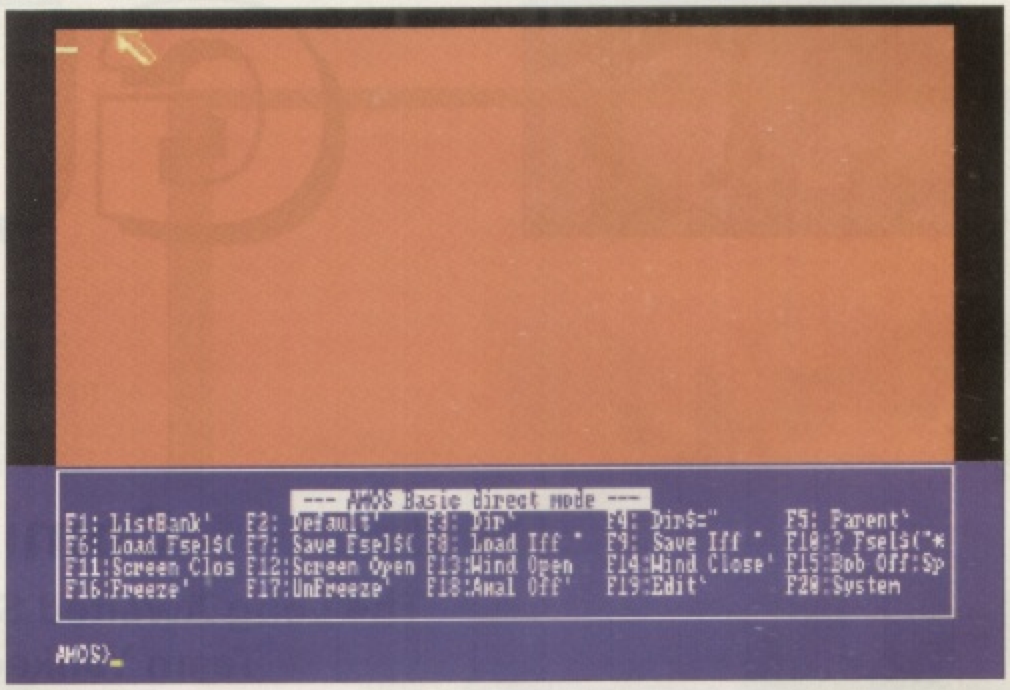


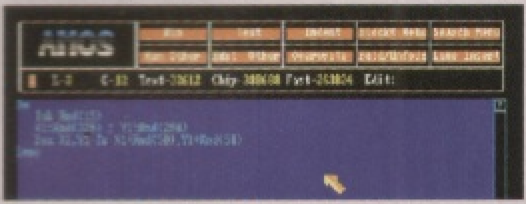
TABLE 1

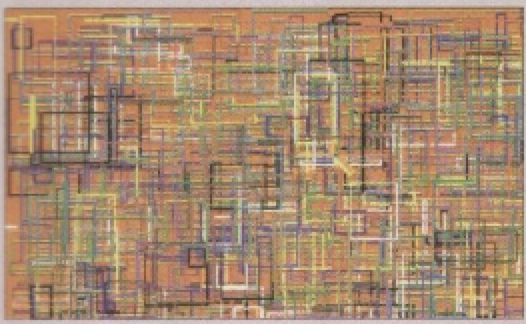
```
CLS 0
FOR A=1 TO 100
  i=rnd(15):p=rnd(15)
  x=rnd(30):y=rnd(20)
  PEN i: PAPER p
  LOCATE x,y: PRINT name$
NEXT A
END
```


WAR IN THE GULF
Coming Soon...
The Long Awaited Sequel to the Award Winning Team Yankee and Pacific Islands!
War in the Gulf pits a crack unit of M1 Tanks against invading Iraqi forces in Northern Kuwait. This game of immense tension and hectic action is set against a backdrop of hundreds of burning oil wells near the Iraqi border.
IBM PC & Compatibles, Amiga & Atari ST.
Owners of Pacific Islands can take advantage of our special upgrade offer!
Contact us for more details on (0268) 541126.
SO REAL, YOU CAN SMELL THE SMOKE
TEAM YANKEE
THE SEQUEL TO THE AWARD WINNING TEAM YANKEE
Pacific Islands
empire
SOFTWARE
Entertainment International (UK) Ltd. 4-6 The Stannetts, Laindon North Trade Centre

USING GRAPHICS

AMOS has a number of interesting line and box effects, all of which are accessed by a simple co-ordinate system. For some interesting effects, try these out commands.

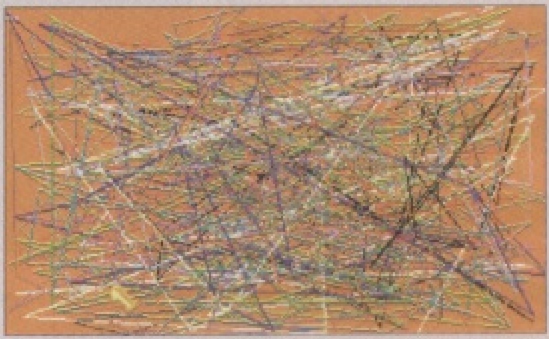




Boxes are drawn with the BOX command, followed by the co-ordinates of the top left and bottom right corners. For example:

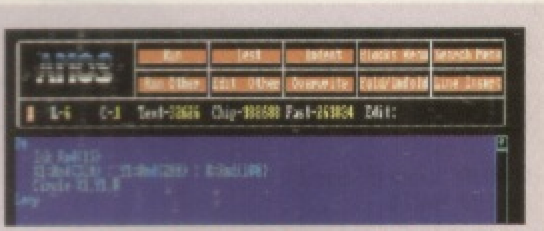
```
DO
 INK RND(15)
 X1=RND(320):Y1=RND(200)
 BOX X1,Y1 TO X1+RND(50),Y1+RND(50)
LOOP
```

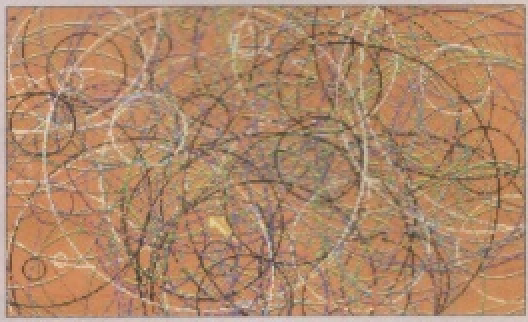




Polygons can be drawn just as simply, using the POLYLINE instruction. You can have as many sets of co-ordinates as you like with this command, as it just draws from one pair to the next. Try this routine:

```
DO
 INK RND(15)
 X1=RND(320): Y1=RND(200)
 X2=RND(320): Y2=RND(200)
 X3=RND(320); Y3=RND(200)
 POLYLINE X1,Y1 TO X2,Y2 TO X3,Y3 TO X1,Y1
LOOP
```





If it's circles you're after then see if you can guess what the command to draw circles is. Yes, it's CIRCLE! To define a circle, you need three co-ordinates, the x-position, the y-position and the radius. Here's one more example:

```
DO
 INK RND(15)
 X1=RND(320): Y1=RND(200): R=RND(100)
 CIRCLE X1,Y1,R
LOOP
```

make the variable (in our case 'i' and 'p') a random number between 0 and 15 inclusive. You can put any number between the brackets you like. For example, if you wanted to do a dice simulation, you'd use the line dice=RND(5)+1. You wouldn't use RND(6) because that would give you a number between 0 and 6, and there is no nought on a die, as you are no doubt aware.

PAPER and INK tell the computer which colours to draw the background and text in respectively. Finally, the LOCATE instruction tells the computer where to place the text, so you aren't restricted to just writing in the top left corner. There you have it, your first program!

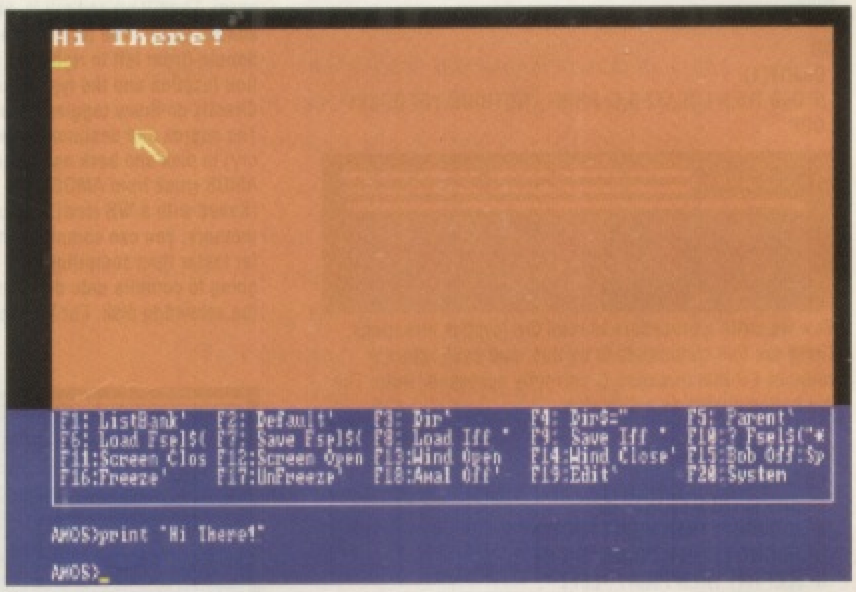
TABLE 2

```
GLOBAL a,b,c,d,e
DO
 PROC NUMBER
 PROC DLINE
LOOP
PROCEDURE Number
 CLS
 PRINT "Enter 5 numbers, pressing return
after each one."
 INPUT a: INPUT b: INPUT c: INPUT d: INPUT
e
 CLS
END PROC
PROCEDURE DLINE
 INK e
 DRAW a,b TO c,d
 WAIT KEY
END PROC
```

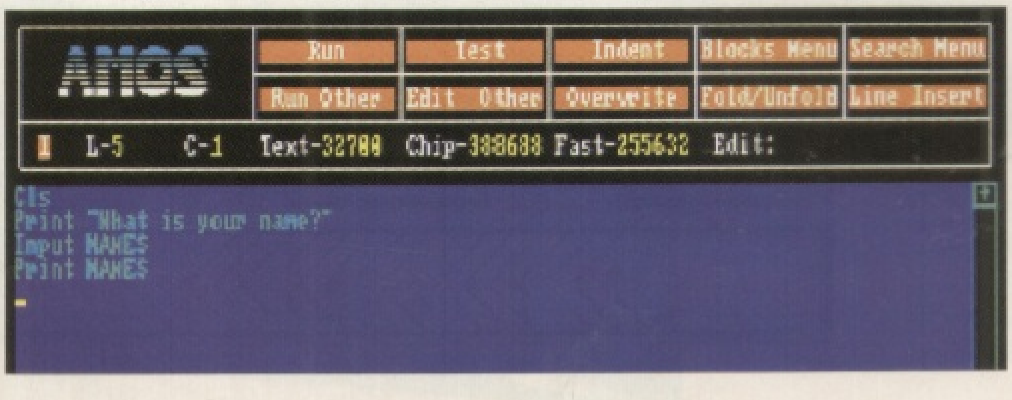
STRUCTURING

You've seen how using a FOR...NEXT loop can save a lot of time, and AMOS has a few more structuring tricks up its sleeve that are well worth getting to grips with. The first, and most important, are Procedures. A procedure is a small, separate routine that can be jumped to from any part of the program, executed and then jumped back from. Imagine you had a program that asked you to insert some numbers, and then drew some lines corresponding to the numbers you had entered. By using procedures, you could structure the program so that the main code itself was very short. Try the example shown in Table 2.

Run the program and see what happens. Now go back to the listing and see if you can figure out what is happening. From the main loop (DO...LOOP), the program is jumping first to the Number procedure, which asks you for five numbers, and then jumps to the Dline procedure, which draws the line from the numbers you gave.



How the screen should look after you typed 'Print "Hi There"' in Direct mode.



The start of your first AMOS listing. Exciting, isn't it?

ALL FOR NOW!

That should give you some idea about how the AMOS system works. To learn more, experiment with some of the step-by-step boxes dotted around these pages, or why not check out next month's issue of CU Amiga when we'll be giving away a free 32-page AMOS guide. If that doesn't satisfy your curiosity, there are a couple of excellent books dedicated to creating games with AMOS, including Phil South's Guide To AMOS, available ➤

SCREEN EFFECTS

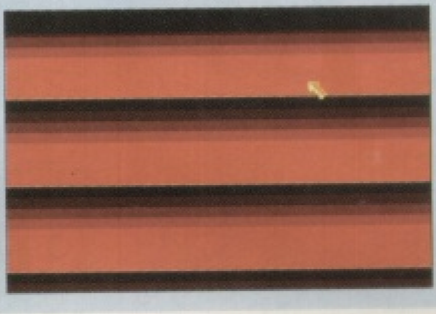
How often have you seen flashy screen fades and wipes and wished you could do the same? With AMOS you can, and you won't believe how easy it is!
To fade a screen, you FADE it, it's as simple as that. Try this out..

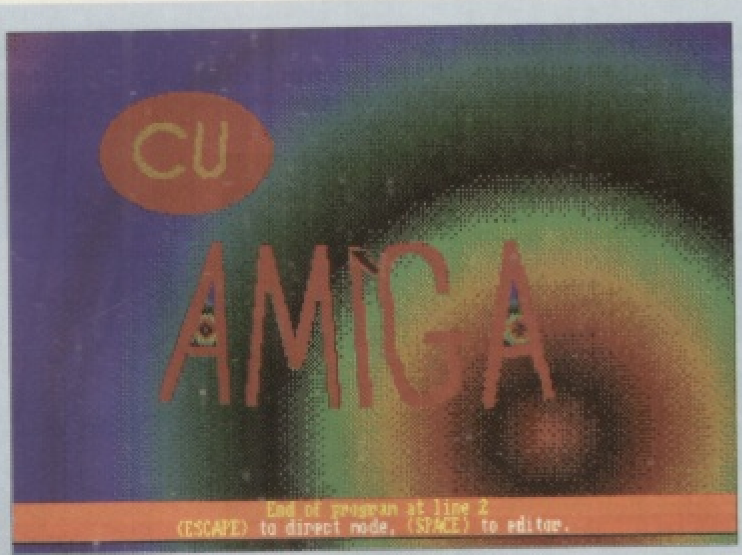
```
LOAD IFF "(Your IFF screen)",1
FADE 15: WAIT 5
```

If you look at a game like Gremlin's Zool, you have to admit that the brightly coloured backdrop adds a lot to the game. How would you like to do the same with one easy command? Give this a whirl.

```
SET RAINBOW 0,1,64, "(8,2,8)","",""
RAINBOW 0,56,1,255
WAIT KEY
```

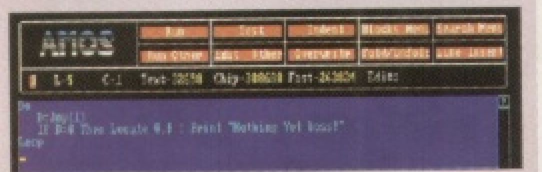
We'll be looking at this command in more detail next month.





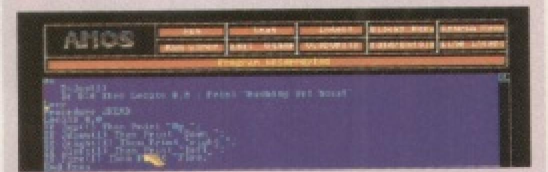
READING THE JOYSTICK

As AMOS is primarily a game creator, reading the joystick movements is an essential part of most packages you'll write. Here's a quick and simple joystick tester.



First of all we set up our loop and put in our initial message.

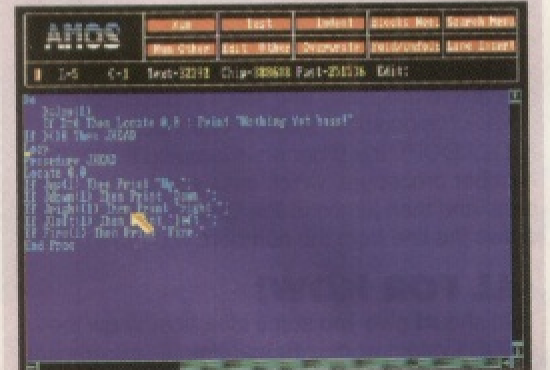
```
DO
  D=JOY(1)
  IF D=0 THEN LOCATE 0,0: PRINT "NOTHING YET BOSS!"
LOOP
```



Now we write a procedure to read the joystick directions. There are five commands to do this, and each return a value of 1 if that direction is currently accessed. Note: The fire button counts as a direction.

```
PROCEDURE JOYREAD
  LOCATE 0,0
  IF JUP(1) THEN PRINT "UP ";
  IF JDOWN(1) THEN PRINT "DOWN ";
  IF JRIGHT(1) THEN PRINT "RIGHT ";
  IF JLEFT(1) THEN PRINT "LEFT ";
  IF FIRE(1) THEN PRINT "FIRE."
END PROC
```

Now we need to join the two together, and this is done with



one little procedure call.

(Insert this after the "IF D=0..." line)

```
IF D<>0 THEN JOYREAD
```

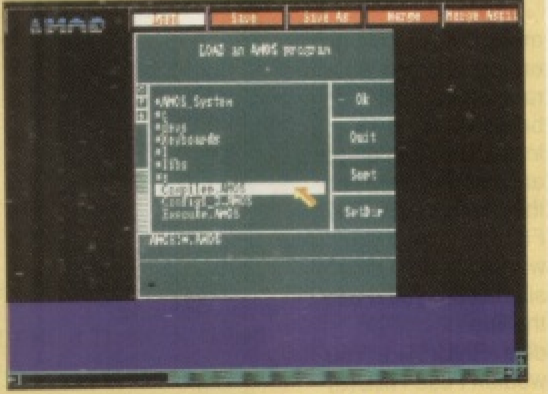
That saves you buying a joystick tester!

WHAT'S A COMPILER?

High-level programs generally run far slower than their machine language partner, simply because before the processor can run your program, it has to convert each line into machine language. This takes time and slows the program down. A compiler turns the entire program into a pure machine code routine, saving the conversion time. Therefore, compiled programs run far faster than the original AMOS listing. AMOS compiled programs have the added bonus of being able to be run independently of the AMOS system.

HOW TO COMPILE YOUR PROGRAMS

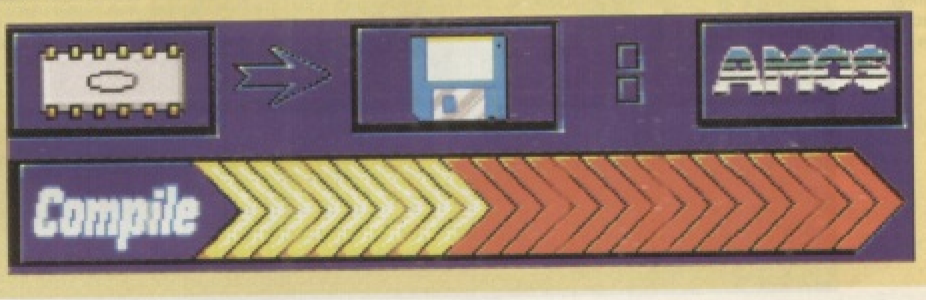
On the AMOS Program disk you'll find the Compiler program. Load it up and run it, and you'll be faced with this control panel. The three large icons at the top of the screen denote (from left to right) the source location, the destination location and the type of compiling required. Clicking directly on these toggles between the two states each offers. The source and destination can be changed from chip (memory) to disk and back again, and the type icon can be either AMOS (runs from AMOS), CLI (runs from CLI) or Workbench (Saved with a WB icon). If you have a megabyte or more of memory, you can compile completely in memory, which is far faster than compiling with disks. For now, though, we're going to compile onto disk, so set the first icon to chip and the second to disk. For the type, select AMOS.



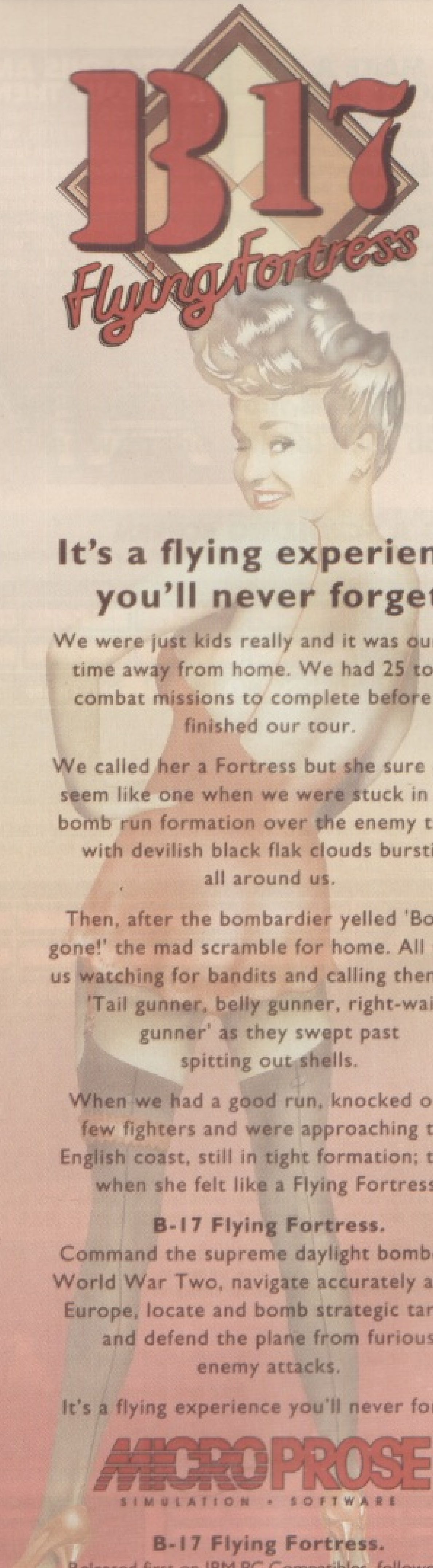


Now click on the Compile button. A file requester will appear, asking you which program you want to compile. Select the 'Scrolling Text Demo' and click on OK. When asked for the destination name, insert a blank disk and type the name 'Text'. Click on OK to continue.

The program will now start to compile. The arrows across the middle of the screen show you how far into the program the compiler is. When it has finished – and this process doesn't take long – quit the program by holding down the Control key and pressing C, return to the editor and load the compiled 'Text' program. You won't notice much speed difference on this program, but at least you now know how to compile!







It's a flying experience you'll never forget

We were just kids really and it was our first time away from home. We had 25 tough combat missions to complete before we finished our tour.

We called her a Fortress but she sure didn't seem like one when we were stuck in tight bomb run formation over the enemy target with devilish black flak clouds bursting all around us.

Then, after the bombardier yelled 'Bombs gone!' the mad scramble for home. All ten of us watching for bandits and calling them out: 'Tail gunner, belly gunner, right-waist gunner' as they swept past spitting out shells.

When we had a good run, knocked out a few fighters and were approaching the English coast, still in tight formation; that's when she felt like a Flying Fortress.

B-17 Flying Fortress.
Command the supreme daylight bomber of World War Two, navigate accurately across Europe, locate and bomb strategic targets and defend the plane from furious enemy attacks.

It's a flying experience you'll never forget.

MICROPROSE
SIMULATION • SOFTWARE

B-17 Flying Fortress.
Released first on IBM PC Compatibles, followed by Commodore Amiga and Atari ST.

MicroProse Ltd. Unit 1 Hampton Road Industrial Estate, Tetbury, Glos. GL8 8LD. UK. Tel: 0666 504 326.

HOW TO MAKE A STANDALONE DISK

So, you've written your program and you want to put it on a disk and give it to your friends. But what if your friends don't have a copy of AMOS? AMOS is copyright software, so you can't just copy it for them. You have two options: you can either compile a disk (see How to Compile your Programs box on previous page) or make a standalone RAMOS disk. To do this, first make a copy of your AMOS program disk, using any suitable disk copier. That done, load the RAMOS program from your AMOS EXTRAS disk. Run the program and follow the on-screen prompts. When this program has finished, you'll have a RAMOS disk – an AMOS program disk without an editor program. Now all you need to do is copy your program to the disk and you have a standalone program.

WHAT'S THIS AMOS ALL ABOUT THEN?

AMOS – The Creator was originally a conversion of an Atari ST game creation package called STOS. Written as a derivative of BASIC, the package is essentially a high-level programming utility, written for humans to understand and then converted for the computer to understand. It differs from Machine Language, which is a low-level language written specifically for the processor. High-level languages typically use English words for commands and lay them out in a logical form. PRINT, for example, will print something to screen. GOTO will go to a different part of the program. High-level languages are ideal for the beginner and can be used as a valuable learning tool for lower level coding.

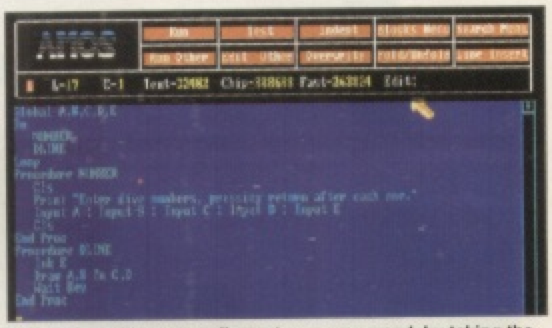




The complete first listing. To indent the left-hand side like I have here use the 'Indent' command on the program menu (F3).



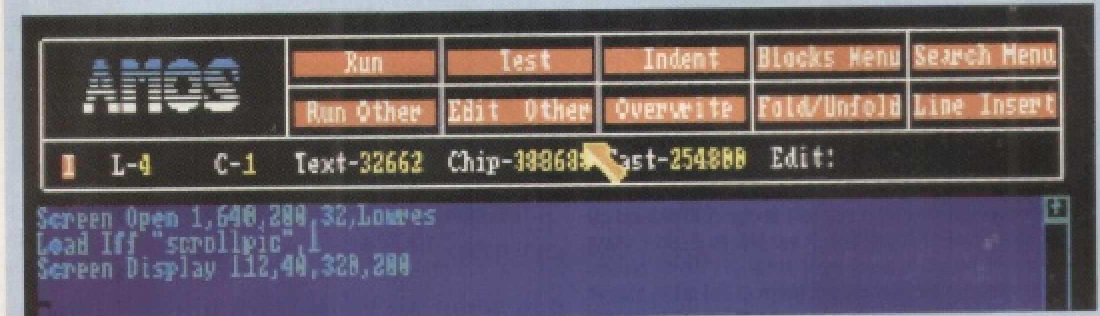
If you ever wanted to have your name in lights, now's your chance!



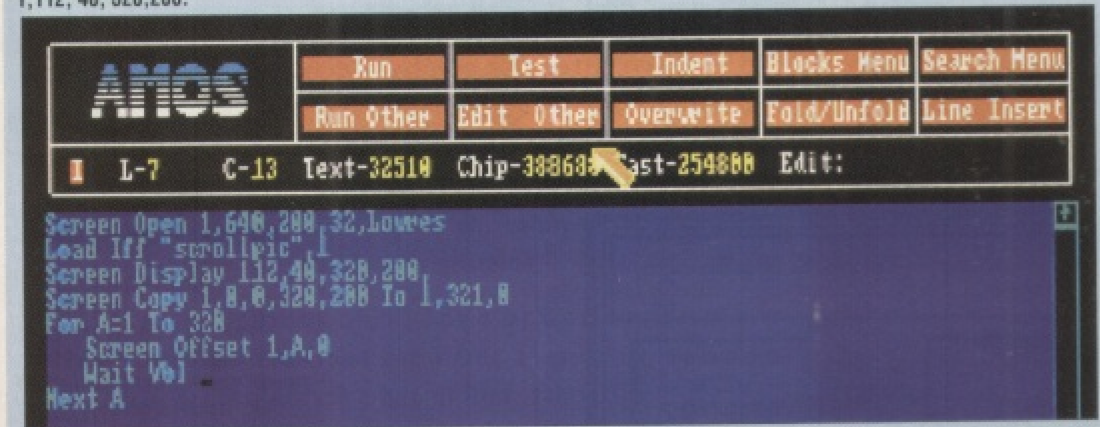
This listing will generate lines at your command, by taking the start and end co-ordinates, along with the colour index.

CREATING A SCROLLING SCREEN

AMOS is excellent at manipulating IFF screens. For example, here's a quick guide to creating your own scrolling backdrop.



The first thing to do is open a screen that is two screens wide with the command SCREEN OPEN 1,640,200,32,LOWRES. Then load in your IFF backdrop with the command LOAD IFF "(Your filename)",1. Finally, add the command SCREEN DISPLAY 1,112, 40, 320,200.



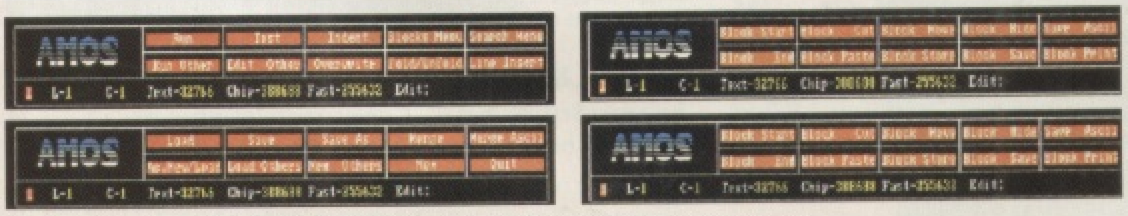
The next thing to do is copy the IFF image onto the second half of the screen. To do this, add SCREEN COPY 1,0,0,320,200 TO 1,321,0. Now you have your extra wide screen, let's get it moving!

The SCREEN OFFSET command defines the area of the screen shown on your monitor. To get everything scrolling, we need to set up a loop that increments the X-position, thereby moving the image horizontally. The lines you need are:

```
FOR A=1 TO 320
SCREEN OFFSET 1,A,0
WAIT VBL
NEXT A
```

NOTE: WAIT VBL tells the computer to wait for the next screen refresh before doing anything, thereby ironing out any jerks.





The four different menu bars, all of which can be accessed with the function keys or the mouse.

DISK VIRUSES

CU Amiga makes every effort to ensure that viruses do not get onto our coverdisks, and we aim to include a virus checker on the disk whenever possible. However, we can accept no responsibility whatsoever for possible damage incurred by viruses which may have escaped our attention.

RELOKICK PROBLEMS

It seems a it seems a few people are experiencing problems with last month's cover program, ReLoKick. For anyone who's having trouble with this excellent utility, here's what to do.

- After unpacking the program, do a soft reset and insert the disk in the machine.
- Some copyright messages will appear, followed by the phrase 'Kicking In Now'.
- When the screen flashes, remove the disk and do a soft reset. You'll now be greeted with the 1.3 kickstart screen.

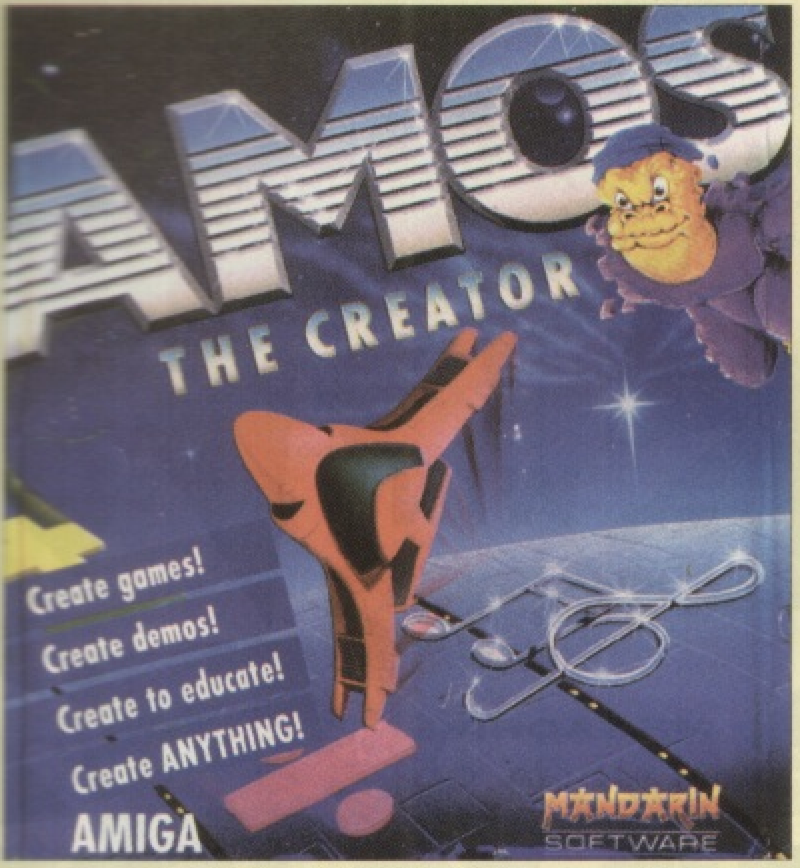
If you have any other problems, please contact the PC Wise helpline on 0685 350505 between 1030 and 1230 every weekday.

NEXT MONTH

Next month we'll be carrying a full 32-page supplement on AMOS and how to use it, including hints and tips on programming shortcuts and ideas, along with a full breakdown of all the AMOS commands. Until then, this should be enough to keep you going. See you next month!

SPECIAL OFFER

AMOS AND AMOS COMPILER DOCUMENTATION SET





Get the most from your free AMOS and Compiler with the official user documentation.

You've marvelled at the power and speed of AMOS and AMOS Compiler. You've tinkered with the demo programs, and maybe even created a few little routines of your own, but what now? If you really want to get the best from this stunning package, there's no substitute for the official instruction manuals.

For starters, the AMOS manual explains in simple terms how the system works. As well as this, every command is listed in detail, with clear examples and descriptions of each to get you up and running within minutes. Extensive technical appendices are also included for detailed information on the more obscure points.

Once you've got to grips with the basic AMOS language, you'll probably want to get things running even faster with the Compiler. The Compiler is available fully packaged, giving you a home for your disks and full instructions in one hit!

To complete your AMOS set, fill in the coupon below (or telephone your order on 0625 859333 quoting reference CU Amiga), indicating whether you require the AMOS manual, the Compiler manual and box, or both. The AMOS manual and Compiler set are each priced at £14.99. Cheques should be made payable to Europress Software Ltd. Alternatively, quote your Access/Visa card number, and the amount will be debited from your account.

NAME..

ADDRESS..

..

..

POSTCODE..

PLEASE SEND ME:

- ❑ **1 AMOS manual @ £14.99**
- ❑ **1 AMOS Compiler manual with box @ £14.99**
- ❑ **1 each of AMOS manual and Compiler manual with box @ £24.99**
- ❑ **I enclose a cheque for £ , made payable to Europress Software Ltd.**

Access/Visa card no.:..

Expiry................................ Date:......................................

Please supply credit card holder's address if different from address above.

Signature:...

Send to: Europress Software, Europa House, Adlington Park, Macclesfield, SK10 4NP. Please allow 14 days for delivery.



It's action galore this issue! Inside your small blue plastic square this month you'll find a fully playable level of Core's smashing *Chuck Rock 2*, and a two-minute playable demo of Ocean's new footie sim, *Premier League Football*.



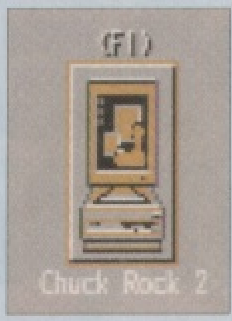
COVERDISK 55

YOUR QUICKSTART GUIDE TO LOADING DISK 55

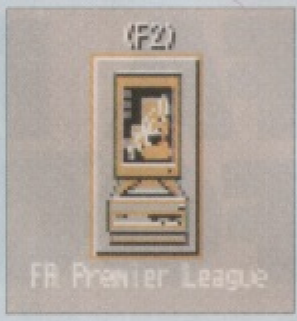
First things first, switch off your machine! Viruses are nasty creatures, and it's far better to be safe than sorry. Leave the machine off for a minimum of 10 seconds (or a maximum of three weeks) before switching on. Disconnect any peripherals (Modems/printers, etc.) and switch off the advanced chipset on the A1200. Wait for the Workbench prompt, and then insert your disk. The drive light will come on for a few seconds, and then the CU icon will appear.



1 Double click on the CU55 icon with the left mouse button. This screen will then appear.



2 Click on this icon to load the *Chuck Rock 2* demo.

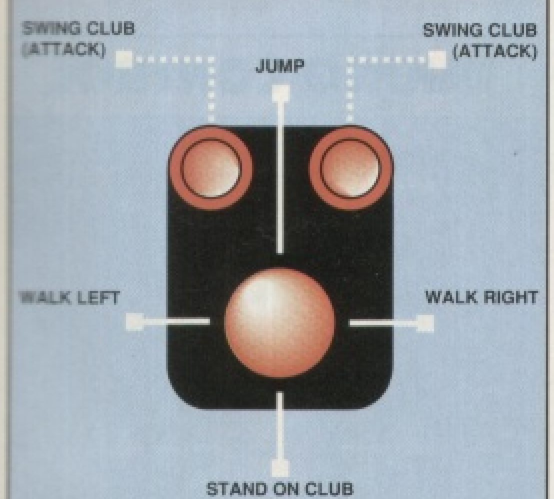


3 Click on this icon to load the Ocean playable demo of *Premier League Football.*

CHUCK ROCK 2 SON OF CHUCK

It's club smashing action in this demo of Core's new baby. Guide Chuck Jnr on his platform-leaping quest to save his Dad.

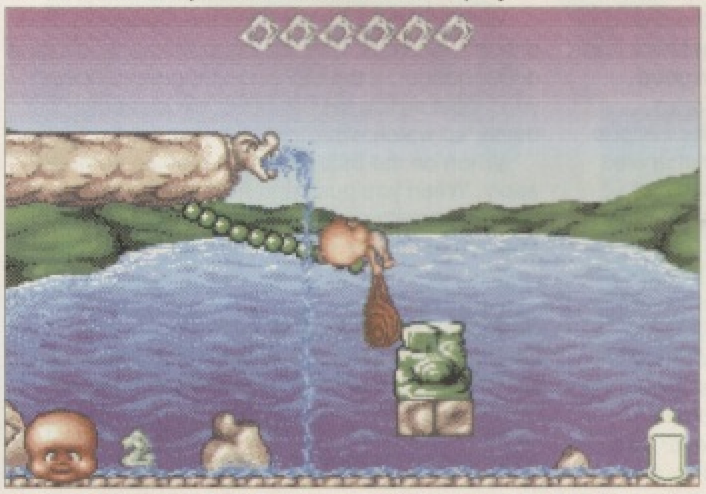
TAKING CONTROL



Help Chuck Junior to rescue his dad! The waterfall level is filled with all manner of nasties, so it's a good idea to use whatever comes to hand to avoid them. Here, Chuck Junior has grabbed hold of a handy vine and is swinging for his life.

Oh no! Chuck has been kidnapped by the evil Brick Jagger and the only person in any kind of position to rescue him is his baby son. Admittedly at first glance, a baby isn't much to contend with. But when this baby is Chuck Junior, well that's something else.

This level is based on the Waterfall section of the game, but won't actually appear in the finished club 'em up. In his travels from the play pen to the lions den, Junior has to make his way through jungles, over volcanoes, along the back of a giant dinosaur, finally to end up at Datstone motors, where Chuck is being held. (You'd know all this if you've read the review on pages 50 and 51). The Waterfall section comes about half way through the game, and features Junior doing battle against surfing turtles, pathetic sharks and the occasional spitting dinosaur. All you need to do is get him from one side of the waterfall to the other – using any method you can.



Chuck is controlled with joystick only, although the finished game will allow you to use a joypad.

Scattered about the level are various components. Good things include the sweets and feeding bottles, which top up your energy, and the squids which can be used as trampolines to get you to higher platforms. Just jump on their heads to launch!

To balance everything out, there are more than enough nasties to harm you. Watch out for the sharks ➤

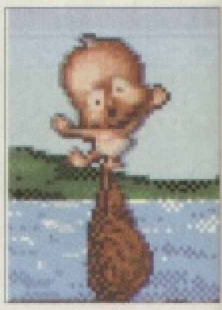
that swim just below the surface, before leaping out of the water with teeth bared. The spikes have to be given special attention too, as landing on these is seriously bad for your health – talk about serious nappy rash!

When you reach the end of the level, Dan The Dinosaur (No relation) will appear. You won't be able to kill him in our demo, but it gives you some idea of the size of the opposition. Time to go clubbing!



Some of the more fun filled aspects of the game are the occasional water chutes.





HINTS AND TIPS

Just like there's more than one way to club a cat, there's more than one way to finish a level. If you are having trouble, try a different route.

Some rocks can be moved around by hitting them. Knock these onto spikes to make novel stepping stones.

For maximum damage, swing your club at the apex (top) of your jump to smash everything below you.

FA PREMIER LEAGUE FOOTBALL

NOTE FOR A1200 OWNERS

FA Premier League is not compatible with the AGA chipset, so here's what you do. Before loading *FA Premier League*, make sure your machine is switched off for 30 seconds. Switch on, and hold down both mouse buttons. When the main menu appears, select the boot options screen. On here, disable the CPU caches and click on the 'Use' button. When you return to the main menu, go to 'Select Display' and click on original chip set. Click on 'Use' to return to the main menu. Click on boot and insert your coverdisk. All should work fine!



Relive that great moment when Spurs (or whatever team you fancy) won the cup. Dream of playing on that hallowed turf and scoring the winning goal.

Oh, the roar of the grass. The smell of the crowd. [*Or something like that – Ed.*] Nothing gets the joystick finger swinging quite as much as a good football title, and with games such as *Emlyn Hughes International Soccer* and *Premier League Manager* under their belts, those happy chappies at Audiogenic should be more than capable of turning out a good football game. At the moment, *FA Premier League* is being coded for Ocean Software, to go up against *Kick Off/Sensisoccer /Goal* etc. and we've got the latest playable demo for you, so you can see exactly how it works.

No sooner will the drive light have gone out than you'll be plunged headlong into the action, so it's worth quickly perusing these instructions before loading. The game is a single player, two minute kickabout against a computer team consisting of...us! Yes, you can try your hands, or feet, against the CU Crew. Do you feel lucky?

The controls are quite straightforward. You always control the player nearest the ball, who will be numbered to let you know what position he usually plays in. Push the joystick in any direction to get him running that way, and pull the joystick in the opposite direction to get him to stop. This might seem like an odd control method, but it does make tactical passing a lot easier to achieve.

When off the ball, pressing the fire button does one of two things. If the ball is in the air, you'll do a diving header. If the ball is on the ground, then you'll do a sliding tackle. Fouls are present in our demo, so watch where you put your feet!

When on the ball, the same running controls apply. When you push and hold the fire button though, something unusual happens. An arrow appears above the player, showing the direction the ball will be shot in, generally towards another player. In the finished game, this method of passing will be optional, but in the demo, it's all you can do. Releasing the fire button passes/shoots.

Other key controls in the game are:

Left shift – Pause game
Right shift – sound on/off.

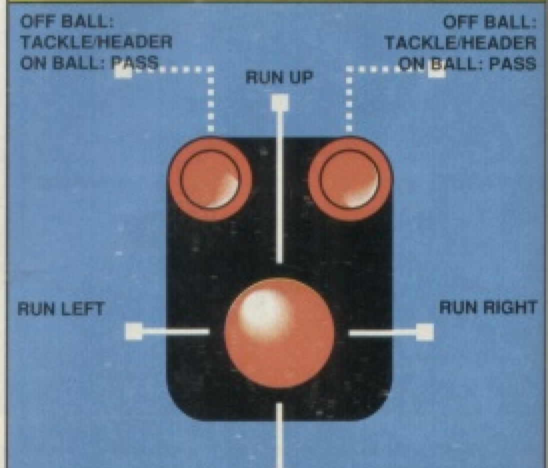
DISK VIRUSES

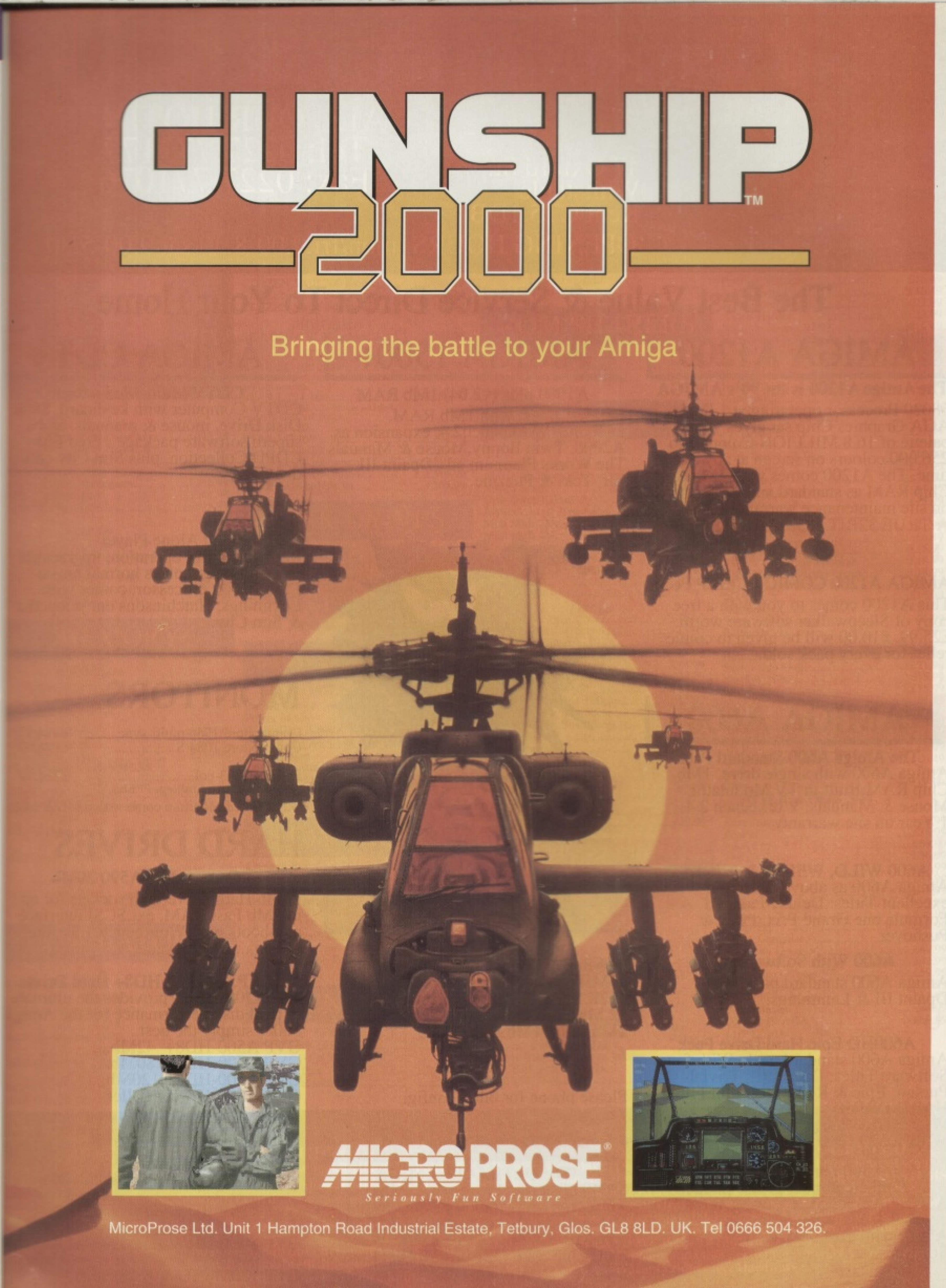
CU Amiga makes every effort to ensure that viruses do not get onto our disks, and we try to include a virus checker whenever possibe. However we are only human, and can accept no responsibility for damage incurred by viruses which may have escaped our attention.

GOOAAAALLL!!!

Every time you score a goal (which isn't very often if you're called Dan Slingsby) the game immediately goes into the special video playback mode. Here you can watch the brilliant shot full speed or even frame by frame. The controls couldn't be simpler: pull the joystick left and the film will rewind, push right and it will fast forward, pulling down causes it to pause (or unpause) and, while paused, if you push up you'll get a frame by frame advance. When you get bored of watching, simply press the R key to return to normal play.

TAKING CONTROL




GUNSHIP
2000
TM
Bringing the battle to your Amiga
MICROPROSE®
Seriously Fun Software
MicroProse Ltd. Unit 1 Hampton Road Industrial Estate, Tetbury, Glos. GL8 8LD. UK. Tel 0666 504 326.

UNIVERSAL COMPUTER SYSTEMS

DIRECT MAIL ORDER

47 Oxford St.
Whitstable
Kent CT5 1DB

CALL OUR HOTINES
Tel: 0227 773177
Fax: 0227 771076

OPENING HOURS mon/fri.9.00-8.30 sat 9.00-5.30

The Best Value & Service Direct To Your Home

AMIGA A1200

The Amiga A1200 is the 90's AMIGA

68020 Processor operating at 14MHz, AGA Graphics Chip set gives you a palette of 16.8 MILLION Colours, so 256,000 colours on screen at any one time. The A1200 comes with 2Mb of Chip RAM as standard,and a 1 Year on site maintenance warranty FREE.

A TRUE 32BIT HOME COMPUTER

U.C.S. PRICE £369.95

AMIGA A1200 COMIC RELIEF Pack

This A1200 comes to you with a free copy of Sleepwalker software worth: £25.99. £10.00 will be given to comic relief for every pack sold.

U.C.S. PRICE £374.95

AMIGA A600

The Amiga A600 Standard Pack

Amiga A600 with single drive, 1Mb Chip RAM,Built in TV Modulator, Mouse & Manuals, Workbench 2.4 1 Year on site warranty.

-U.C.S. PRICE £279.95

A600 WILD, WEIRD & WICKED

Amiga A600 as above With four excellent Titles: Deluxe Paint III, Formula one Grand Prix, Putty & Pushover.

A600 With Software pack

Amiga A600 standard pack with Dpaint III & Lemmings.

U.C.S. PRICE £284.99

A600HD Epic Hard Drive Pack

Amiga A600 standard pack ,With four Software Titles: Dpaint III, Trivial-Pursuit, Epic & Rome. + An Int.Fitted HARD DRIVE.

With 20MB Hard Drive......	£389.99
With 40MB Hard Drive......	£439.99

A500 plus Stand Alone
Limited number please phone

A500+ 1Mb RAM, TV Mod, Work-bench 2.4, Mouse & Manuals.	£194.99
Above with Cartoon Classic Software pack......................	£229.99

AMIGA 1500+

A1500 plus (v2.04) 1Mb RAM

Full UK Spec. with 1Mb RAM, including Workbench2.4, expansion as A2000, Twin floppy,Mouse & Manuals The Works Platinum ad., Dpaint III, Elf, Toki & Puzznic.

U.C.S. PRICE £479.99



ZOOL S/WEAR PACK

This amazing offer available with any amiga purchased, includes: Zool, Striker, Pinball Dreams & Transwrite normal retail price £127.92

U.C.S price £8.99

AMIGA 3000

The superb AMIGA 300

52 Mb Hard Drive, 68030 Processor 25MHz, 3.5 880K FD, spare drive bay 512K 32Bit ROM, 4 Zorro III slots 52 Mb Hard Drive. 1Mb Chip, 1Mb Fast RAM.

U.C.S. PRICE £1,289.99

Please phone for other config.

AMIGA 4000

The ULTIMATE AMIGA

68040 blistering Processor 25Mhz, AGA chip set, 256,000 colours from 16.8 million, flicker free display, 3.5/ 1.76 MB 3.5"drive , Cross Dos, WB. 3 2Mb Chip Ram (32Bit) 4MbFast Ram (32Bit) 120Mb HD 1 year on site

AMIGA CDTV

CDTV Multi-Media Pack

CDTV Computer with keyboard, 880k Disk Drive, mouse & manuals. and a superb software package : Fred Fish-CDPD Collection, plus Sim City cdtv disk.

U.C.S. PRICE £479.99

CDTV Stand Alone Player
Remote control operation, upgraeable to a full amiga, plays normal music-CDs, 68000 processor, comes with : Lemmings, Hutchinsons encyclopedia & Sim City..

U.C.S. PRICE £385.95

MONITORS

Commodore 1960 multi-sync	£394.95
Commodore 1084 S................	£198.99
Phillips 8833-col...................... (Inc.Lotus Turbo Challenge FREE.)	£224.99

ALL U.C.S.Monitors come with a FREE cabl

HARD DRIVES

Commodore A590 20Mb

20Mb Hard Drive with sockets for up to 2Mb Fast RAM, ext.SCSI interface autoboots with Workbench 1.3+, built in Fan,........................ £199.9

GVP. Series II HD8+ Hard Drives

The A500-HD8+ provides the ultimat in hard disk performance for the Ami 500/+ simply the best..

GVP A500-HD8+ 42Mb....	£289.9
GVP A500-HD8+ 80Mb....	£369.9
GVP A500-HD8+ 120Mb....	£449.9
GVP A500-HD controller	£179.9

GVP IMPACT SERIES II hard drives, with game switch, SCSI port, Int.RAM expansion up to 8Mb FAAASTROM SCSI Driver and a full 2 year Guarante

GVP Series II 1500/2000

GVP 42MbHD & Ram card	£289.
GVP 80MbHD & Ram card	£349
GVP 120MbHD & Ram card	£424

Peripherals & Software

PLEASE COMPARE OUR PRICES
U.C.S. Will Save You £££'s
ALL MANUFACTURES WARRANTYS Remain Intact Despite our LOW,LOW PRICES.

ACCELERATORS & HARD DRIVES

A500/500+ GVP A530 Combo

A530 40Mhz/42Mb HardDrive...	£649.99
A530 40Mhz/80Mb HardDrive...	£734.99
A530 40Mhz/120Mb H/Drive....	£829.99
A530 40Mhz/213Mb H/Drive....	£909.99
A530 68882 Co-processor	£218.99
32 Bit Simms 1MB	£ 64.99
32 Bit Simms 4MB	£175.99

1500/200 G-Force ACCELERATORS

G-force 030-25mhz + 1Mb	£454.99
G-force 030-40mhz + 4Mb	£739.99
G-force 030-50mhz + 4Mb	£999.99
G-force 040-33mhz + 4Mb	£1,399.99
G-force 040-28mhz (A3000)	£1,399.99

MEMORY

A500/500+ POWER Ram Exp. UNITS

0Mb pop to 2Mb	£119.95
0Mb pop to 4Mb	£189.99
0Mb pop to 8Mb	£289.99

TRAPDOOR EXPANSIONS

A500

A500/ 512K with clock	£25.95
A500/ 512K without clock	£21.95

A500 plus

A500+ 1Mb	£32.99

A600

A600 1Mb with clock	£44.95

PCMCIA

A600/1200 PCMCIA card 2Mb..	£115.95
A600/1200 PCMCIA card 4Mb..	£184.95

EMULATORS

GVP	
GVP PC-286 16Mhz	£148.99
KCS 500/500+	
KCS powerboard 500/500+	£139.99
KCS A600	
KCS powerboard A600	£159.99
KCS 1500/2000	
KCS adaptor for 1500/2000	£57.99
VORTEX	
VORTEX Golden Gate (For 1500/2000/3000/3000T)	£379.99

PRINTERS

CANON	
CANON BJ 10EX Portable	£214.99
CANON BJ 10SX Portable	£299.95
CANON BJ 200 Desk Top	£345.99
CANON BJ300DT/(80column)	£374.99
CANON BJ330DT/130 " ")	£479.99
CITIZEN	
CITIZEN Swift 200 colour	£214.95
CITIZEN Swift 200 mono	£186.99
CITIZEN Swift 240 colour	£262.99
CITIZEN Swift 240 mono	£249.99
SEIKOSHA	
SEIKOSHA SL95 colour	£209.95
STAR	
STAR LC 100 colour (9 PIN colour with paper parking, 8 fonts and DIP switches.)	£164.99
STAR LC24-100 (24 PIN PRINTER with compressed data-mode, 10 fonts, 16k buffer.)	£184.99
STAR LC 20	£129.99
STAR LC 200 colour	£194.99
STAR LC24-200 colour	£269.99
STAR LC24-200 mono	£214.99
STAR XB24-200 colour	£379.99
STAR SJ48 bubble jet	£209.99

DISK DRIVES

FLOPPYS	
A500/+ Replacement INT.drive.	£39.99
CUMANA CAX 354 EXT.	£56.99
ROCTEC EXT.floppy	£63.95
POWER DUAL DRIVE	£119.95
CDTV.ROM DRIVE	
COMM. A570CD rom drive	£239.95

MICE & TRACKBALLS

MICE	
Roctec Mouse	£13.99
Power Mouse	£17.99
Alpha Data (Optical Mouse)	£34.99
GOLDEN IMAGE	
Mega Mouse	£12.99
Optical Mouse	£32.95
Infrared-Cordless Mouse	£47.99
Optical Pen Mouse	£39.99
Crystall Trackball	£37.99

JOYSTICKS

Cheetah Bug.	£12.99
Competition Pro 5000	£13.99
Cruiser (Black)	£POA
QuickJoy Jetfighter	£11.99
QuickJoy 137 F Python	£9.99
QuickJoy 155 Aviator	£25.99
QuickJoy FootPedal	£20.99
QuickJoy TopStar	£20.99
QuickJoy Turbo Touch 360	£20.99
Freewheel.	£25.99

GENLOCKS

GVP	
GVP G-Lock Genlock	£331.95
ROCGEN	
ROCGEN Plus	£144.99
ROCGEN Rockey	£279.99

SCANNERS

GOLDEN IMAGE	
Alfa Scan Hand scanner	£119.99
Alfa Scan Plus H/Scanner	£139.99
Alfa Scan OCR (inc. ocr.S/W.).	£269.99
POWER	
Power Scanner Mon.v3 A500/+	£107.99
Power Scanner Col. A500/+..	£224.99
Power Scanner Col. A1500	£224.99
FLAT-BED	
Epson Flatbed 6500	£749.95

ROM SHARERS

A600 Rom Sharer	£28.50
Rom Sharer Inc. 2.4 Rom	£47.99
Rom Sharer Inc. 1.3 Rom	£36.99
Rom Sharer Kickoff	£16.95

ACCESSORIES

LEADS & CABLES	
Amiga 8833 Mk.2	£8.99
Amiga Multisync.	£POA
Amiga Scart.	£8.99
Disk Drive Extension	£9.99
JoyStick Long Extension	£5.99
Midi Midi 2M.	£3.99
Midi Midi 4M.	£5.99
Modulator Extension	£9.99
Mouse & Joystick Ext	£5.99
Mouse & Joystick Splitter	£18.99
Printer 1.8M.	£4.99
Printer 3.0M.	£7.99
Bits & Things	
14" Monitor Dust Cover	£10.99
14" Tilt & Swivel Stand	£15.95
A500 Dust Cover.	£4.99
A600 Dust Cover.	£4.99
Anti Glare Screen Filter	£14.99
Control Centre A500/+	£38.99
Control Centre A600	£35.95
Lockable Disk Box 100cap	£15.99
Lockable Disk Box 80cap	£19.99
Lockable Disk Box 40cap	£8.99
Mouse Mat.	£5.95
Stereo Speakers.	£14.99
DISKS	
Branded Box of 10	£9.95
Unbranded Box of 50	£26.99
MUSIC	
GVP Digital Sound Studio	£44.95
Stereo Sampler.	£29.99

U.C.S. START-UP PACKS

Amiga 1200 Pack A
Amiga 1200 2Mb Computer, Cumana Ext. Floppy Drive, Mouse Mat, Joystick, 80cap-D/Box, with 10 disks, Zool S/W Pack.
RRP £628.93
UCS Price £471.86

Amiga 1200 Pack B
As Pack A with the Addition of a Philips 14" colour stereo Monitor, Lotus Turbo Chall.2 And monitor Cable
UCS Price £696.85

Amiga A600 Pack.
Amiga A600 2Mb Computer, Cumana Ext. Floppy Drive, Mouse Mat, Dust Cover, 80cap-Disk Box with 10 Disks, Zool S/W Pack.
RRP £591.92
UCS Price £431.95
Above 600 pack with monitor... £611.24

SOFTWARE

GAME ZONE	
Street Fighter II.	£17.99
Alien Breed Special ED.	£8.49
ZOOL.	£16.49
ZOOL 1200 Ver.	£19.49
WWF 2.	£16.49
Indiana Jones, Fate of Atlan.	£22.49
Silly Putty.	£16.49
Premier Manager.	£16.49
A.Macleans Pool.	£16.49
Wing Commander.	£22.99
AV8B Harrier.	£22.99
Sensible Soccer 92/93.	£16.49
Lotus Fin. Challenge.	£16.49
Leathal Weapon.	£16.49
Sim Earth.	£22.99
Pit-Fighter.	£6.49
Bubble Dizzy.	£6.49
Robocop II.	£6.49
Prince of Persia.	£6.49
Lemmings Double Pack.	£18.99
F1. Grand Prix	£21.99
Road Rash.	£15.99
PGA Tour Golf Plus.	£18.99
Raving Mad.	£15.99
Civilisation.	£21.99
Legend of Kyrandia.	£21.99
Assasin.	£15.99
Trolls.	£15.99
Darkseed.	£21.99
Smash T.V.	£6.49
Jaguar XJ220.	£15.99
J.Whites W/Wind Snooker.	£18.99
Nigel Mansell World Champ.	£18.99
Le Chucks Revenge.	£22.49
BC.Kid.	£15.99
Humans.	£18.49
Super Cars II.	£6.99
Battle Hawks.	£9.49
Campaign.	£21.99
Batman II.	£21.99
Nick Faldo Golf.	£21.99
Shadoworlds.	£15.99
Fire & Ice.	£15.99
New Zealand Story.	£6.49
Falcon.	£9.99
J.Madden Football.	£15.99
Superfighter.	£15.99
3D Pool.	£6.99
Lombard RAC Rally.	£6.49
James Pond.	£6.99
Swiv.	£7.99
APPLICATION S/W.	
Wordsworth 2.	£87.99
Excellence 3.	£54.99
PenPal.	£35.99
Final Copy 2.	£69.99
The Publisher.	£36.99
Home Accounts 2.	£37.99
Mini Ofice Pro.	£37.99
Hyper Book.	£49.99
CanDo V2.	£99.99
Amos.	£36.99
Amos Pro.	£44.99
Amos Compiler.	£19.49
Directory Opus IV.	£49.99
Quarterback.	£42.99
Quarterback Tools V5.	£59.99
Cross Dos + V5.	£21.99
Pro-Midi Interface.	£17.99
VideoMaster.	£44.99
D.Paint IV AGA.	£69.99

MANY MANY MORE TITLES IN STOCK , PLEASE PHONE.

A NEW AMIGA EXPECTED BASED AROUND 68030 PROCESSOR PLEASE PHONE FOR DETAILS

BE SURE TO MAKE THE RIGHTCHOICE

Buying by mail ordercan be froughtwith problems,so makingthe rightchoice of mail ordercompanyis essential. We at UNIVERSALareourselvesdevoted Amiga users,and are therforeable to offer you the customerour full supportand expertise.

We can offer you a fast and efficient deliveryservice with the minimumof fuss.

ALL U.C.S. Prices are inclusive of VAT,

If you are looking to buy an item not listed in our currentadvertisement, please phone and ask, we will undoubteblyhave it available.

All offers are subjectto availability,Allprices are subjectto change, but are correct at time of going to prees.

HOW TO ORDER
ALL MAJORCREDITCARDS ACCEPTED

We offer same day despatchfor creditcardordersplaced before 5pm, or send cheques, bankersdraft,postal ordersTo UNIVERSAL COMPUTERSYSTEMS 47 Oxfordst, Whitstable,Kent, CT5 1DB. Please allow 7 workingdays for personal/businesscheques to clear. Send your Nane & address,along with your daytime Telephonenumber(if possible) and your orderrequirements.

BY PHONE, phone our orderhotlins with your creditcardnumber,address& orderrequirementsAND WE WILL DO THE REST.

POST & PACKAGINGPlease add £1.00 per item of software& small periph. Add £5.00 per item for large Peripherals& Hardware

E&OE.



The Brain Game

Are human beings still kings of the hill when it comes to intelligence? Maybe, but our silicon pals are closing the gap... Nick Veitch peers into the future.

You can just imagine the scene. The last few survivors of the human race battle past inhuman robot guards in a last desperate attempt to shut down the reactor which is fuelling the huge artificially intelligent computer. It is a scenario which has returned again and again in various terrible plots, which sometimes produce a watchable film (Terminator, Robocop, etc.).

The reality is very far removed from this. There has been no machine which has ever rivalled the intelligence of a lab rat, never mind a human being. Besides that, any even vaguely intelligent system has been put to work in the service of mankind, to varying degrees of success. But where is the threshold of intelligence? An automatic kettle turns itself off when the water has boiled, but it has no understanding of water, its boiling point or how to make a decent cup of tea. If you don't put any water in to start with, the kettle will still try to boil.

The quest for real artificially 'alive' machines is motivated purely by vanity, man's desire to create in his own image. That doesn't mean to say there aren't some very useful spin-offs though. But before we can create intelligence, we must understand what being intelligent is. A child who can do his 12-times tables at the age of four would be considered a bit of a prodigy – but for a machine it's no a remarkable feat at all. In wooly-speak, intelligence can be defined as the ability to understand, judge, reason and make decisions.

What, then, constitutes an intelligent machine? That question alone is enough to send waves of confusion and contradiction teeming through the scientific community. There is a widely acknowledged test though...

The Turing Test

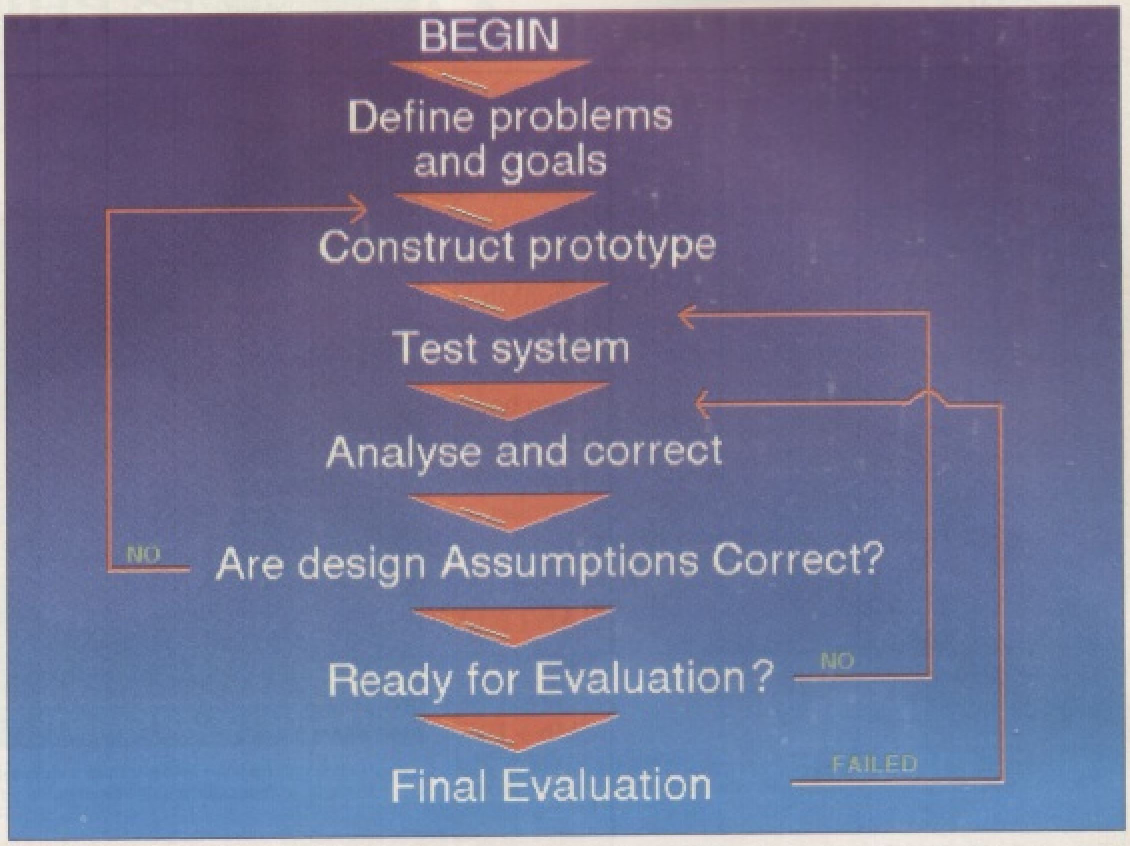
So how do you tell whether a machine is intelligent or not? Well, you don't. By a simple process of reversing the logic, a Professor by the name of Turing said simply that a machine was intelligent if you couldn't tell that it was not intelligent.

Essentially this test would involve a human tester asking questions of a series of human controls and AI units, in an attempt to discern whether or not they were 'real' or 'artificial'. Unfortunately this is not what you would call a mathematically precise test, in that different people could give different answers. It is not a test which can be replicated, which makes it a bit unpopular with scientists.

All of this is academic really, because no AI has ever been able to consistently fool people armed with the right questions. Interestingly, some early AIs' responses to questions were giving to psychiatrists to analyse, who, not knowing they were dealing with computers, diagnosed them all as having character disorders. This was turned around with the emergence of various AI programs which attempted to analyse the psyche of the questioners. The best known of these was the Eliza AI, which did manage to fool a number of people, simply by rewording information which they had already supplied to it.

But even the Turing test wouldn't satisfy everyone. Some have pointed out that by merely processing a set algorithm (albeit a very complicated one), an AI could pass the Turing test, but still not have any real understanding of what it is doing. It could, for example, apply the same rules to instructions written in Japanese just as well as it could to an English phrase, without necessarily understanding either.

A manufacturing diagram for an expert system. Note that it is sometimes necessary to restructure the basic procedures as well as add to the knowledge base.



EXPERT SYSTEMS

As Francis Bacon once said, knowledge is power. A massive computer which could answer any question put to it is a theme which comes up time and time again in fiction (Deep Thought, The General, etc.) but it is not something that those groups developing AIs are working towards. At the moment they are more interested in an intelligent machine which can come even close to being able to take decisions which humans take every day of their lives. These systems are built up from an immense amount of raw data and a complex set of algorithms to determine the correct course of action. Unfortunately, the algorithms seem to be the weak point, but some effective systems have been created by over-compensating with the amount of data supplied.

A store of such data is known as a 'knowledge base' and is usually built up by questioning dozens of experts in the particular field to which the expert system is to be applied. One success story is MYCIN, a medical expert system which specialises in the diagnosis and treatment of meningitis. It continually gets a better success rate than any single consultant, but it is always used as a tool to aid diagnosis by a doctor, rather than a replacement system. This is partly due to patients' fears and partly because it is just possible that the computer would miss something completely obvious that a real doctor might detect – like the patient is lying or obviously mad. It may seem a little sad, but apparently the medical establishment would prefer if more people suffered due to tricky mistakes, rather than fewer people suffering because of simple mistakes.

The problem with such systems is that in order to create them it is necessary to acquire all the knowledge and feed it into the machine in the first place. A truly intelligent machine would be able to learn, which takes us swiftly into the domain of...

NEURAL NETS

The human brain consists of many thousands of 'neurons' – highly complex cells that are known to be somehow involved with functions such as decision making and pattern recognition.

Their exact function is still not known, but

BUT HOW DOES IT WORK?

A neural network attempts to emulate the brain by loosely copying the mechanics of human brain cells. Each cell is connected to many other cells, and can 'fire' – or pass on a signal – only if the combined value of its inputs exceeds a certain threshold. Each input to the cell is given a different importance, or weighting. These weighting factors can be adjusted to allow the network to perform some pretty amazing feats.

A typical network consists of three layers of cells – an input layer, an output layer and a hidden layer. Before the network is used, the cells all have random weights. To become a useful network, it must first be trained.

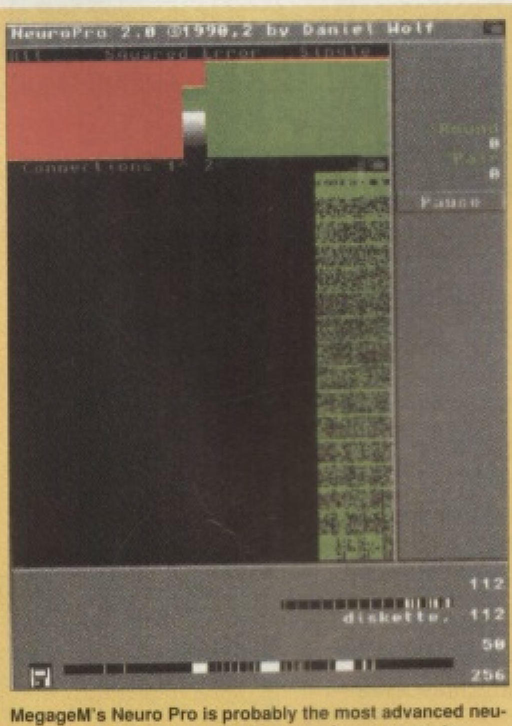
This is achieved by exposing the input layer to, for example, a picture of an apple. The output from the network – which will initially be total garbage – is compared to the input, and the difference used to calculate an error value. For example, we may want the network to respond with the word 'Apple' when shown a digitised picture of an apple.

The error between the output and the input is used to alter the weights of the cell connections between the different layers, through a process called 'back propagation', which is repeated many times.

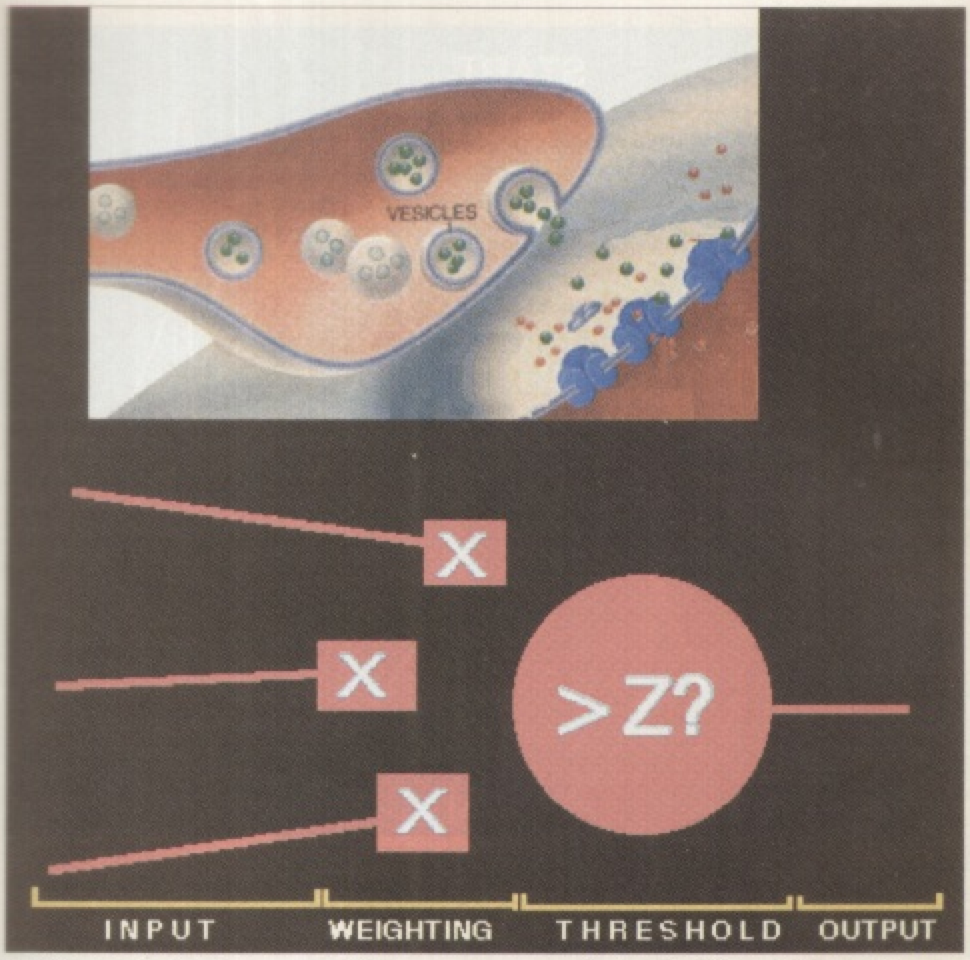
Eventually the network will start producing useful results – when a picture of an apple is presented to the input layer, the output layer will generate the word 'Apple'. The network is capable of learning several other pairs in this way, until it becomes saturated.

Interestingly, when the input layer is exposed to a picture it has not seen before, it makes a very good guess as to what it is. For example, if a picture of an apple with a bite taken out of it was used, the network would still output 'Apple' and not 'Orange' or 'Banana'.

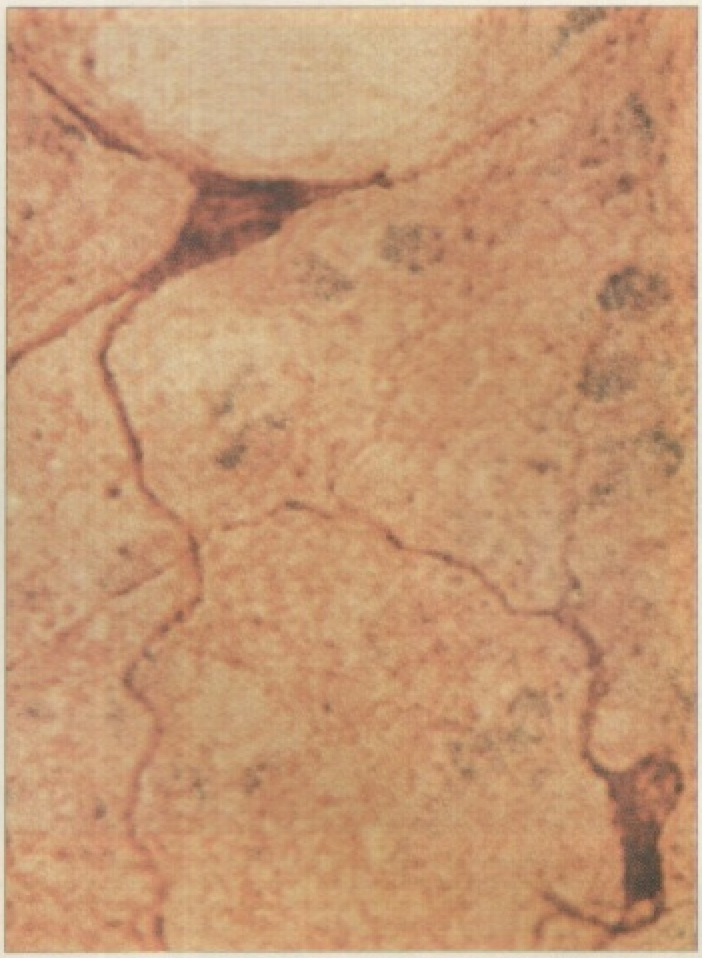
Neural networks are thus very good at recognising patterns, and are widely used in industrial applications. Sometimes the patterns are more subtle, in that they may not even be in visual form. For example, the control of an industrial plant may require output signals which depend in a very obscure way on previous input signals. A neural network trained with the inputs and outputs may provide a remarkably cost-effective way of automating the process.



MegageM's Neuro Pro is probably the most advanced neural network software available on any home computer.



Top: Diagram showing a human neuron. The gap, or synapse, presents a barrier which must be crossed by certain molecules. *Bottom*: This is simulated in a computer model by a threshold value which must be exceeded before the neuron will 'fire'.



Neurons may be the key to human brain power, but the cost of building a network with even five per cent the capacity of a human brain is prohibitive.

even by 1941, Warren McCullough and Walter Pitts had constructed a mathematical model using simple neurons and their interconnections – the first neural net. They discovered that all pure logic problems could be described by a neural network, as long as you knew what the net should look like. For many scientists, this was the proof needed to describe the human brain as nothing more than a highly complicated, although ultimately reproducible, machine. It seemed that truly intelligent machines were only a matter of years away.

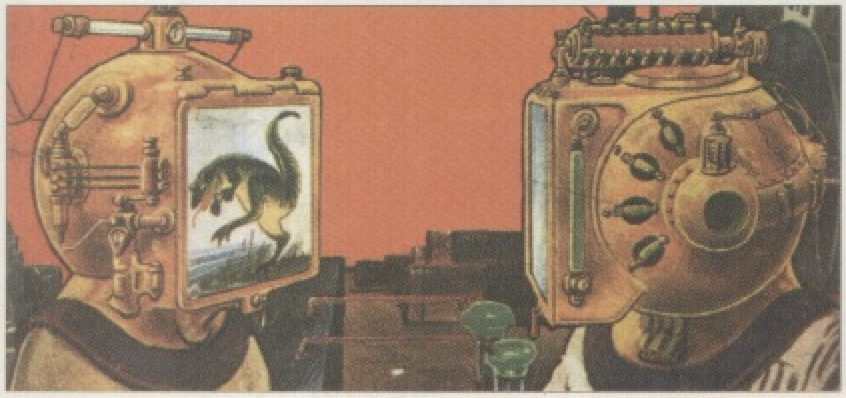
Unfortunately, the work of Marvin Minsky and Seymour Papert showed that such simple nets (sometimes referred to as perceptrons after their ability to recognise patterns) had severe limitations, and no matter how large or fast, would always fail under certain circumstances. This fact crippled research into neural networks practically overnight, for it seemed that neural nets were a completely dead end.

To the rescue came the networks developed by Stephen Grossberg and John Hopfield. These new nets were special in that they could be 'trained' to recognise inputs, rather than relying on pre-programming. A process called 'back-propagation' allowed the networks to re-organise themselves, altering connections and their thresholds, depending on how far their output differed from the desired target result.

Given enough training, even a relatively small network could recognise simple patterns with 100 per cent accuracy. The amazing thing is the way in which the networks reacted to input that had never been seen before – other than responding with a 'don't know – never seen it before' answer, they still produced an output. Such a net trained to recognise a particular typeface would make a good attempt at recognising a slightly different font, too.

Of course, nothing is perfect. Once the patterns become large the networks grow in size and become prohibitively slow to process. Furthermore, a network trained to recognise, say, different breeds of armadillo, will be useless at predicting Premier Division football results. The latest nets – Boltzman networks – add the concept of energy levels to prevent loops from occurring, and have recently appeared modelled in silicon.

It is fair to say that a network simulating a complete human brain is completely impossible – for the moment.



CU GUIDE TO AI MACHINES

According to the rules of intelligence set down by the CU crew, here is a quick spotters' guide to AIs

IS
- Airbus 320
- London's Traffic control system
- MYCIN, medical diagnostic software
- The Terminator
- Replicants (from Blade Runner)
- Viking Mars Lander

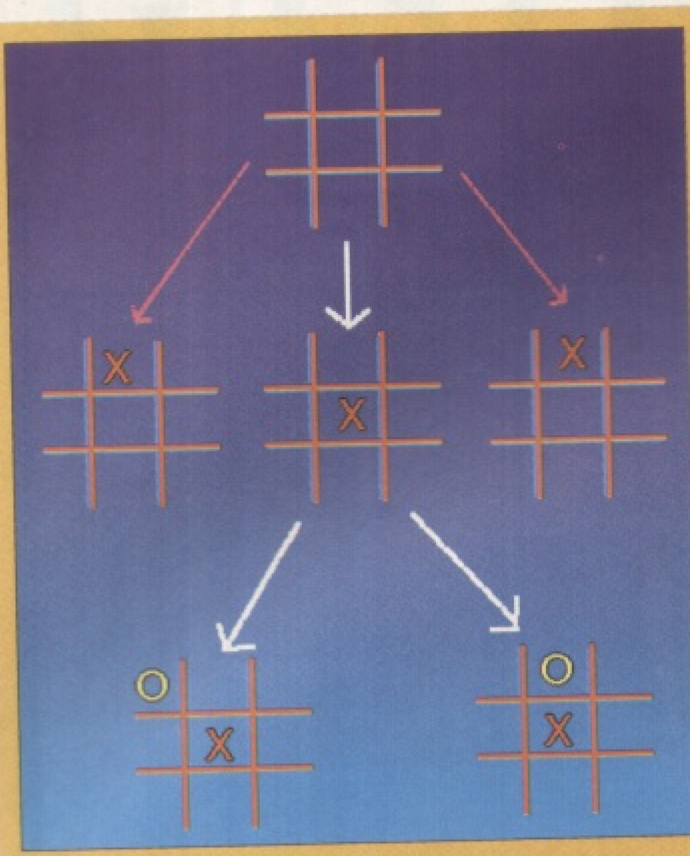
ISN'T
- Cashpoint machine
- Kettle
- John Major (well, artificial maybe...)
- Video recorder
- Telephones
- Microwave

HEURISTICS

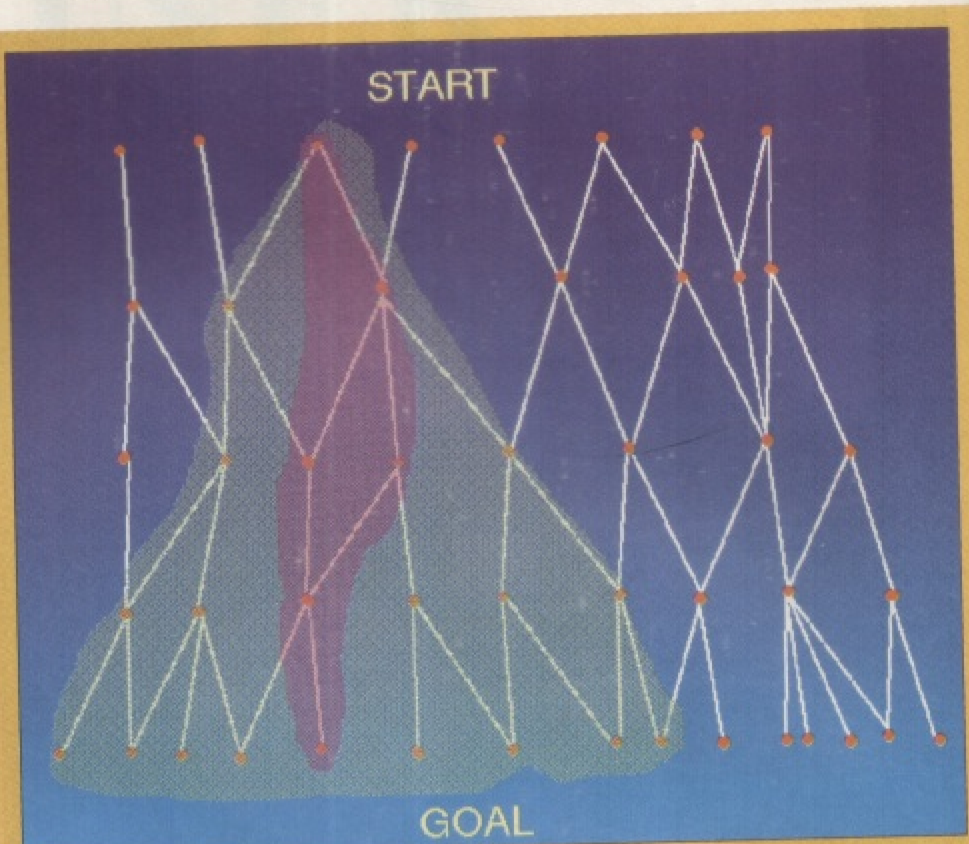
The early attempts at using computers to solve simple puzzles were very successful. They were pretty fast and very accurate, but they could have been even faster. These involved computers taking on games with simple rules which they could follow, like noughts and crosses. What could be easier?

Unfortunately, they worked by 'looking ahead' and calculating every possible move in a game. Even with a simple game of noughts and crosses there are 362,880 possible sequences of moves. Imagine a game with only slightly more complicated rules, like draughts for instance, and you quickly discover the limitations of your calculator.

You can think of the process of this search as a ➤



Heuristics dramatically reduces the number of evaluations performed by ignoring any paths which don't look promising. By ignoring these paths at the outset, the search time is reduced dramatically, in this case by 89%, which makes a vast amount of difference to the practicality of such systems.



The best path is not always obvious from the start. In this diagram the search area is represented by nodes, shown here as red dots. The shaded area shows a forward looking search, which chooses the best-looking initial position and searches forward. By combining this with a backwards search an optimal 'envelope' of possibilities is identified (highlighted in purple).



tree, with every move creating another set of branches. Heuristics is all about pruning this tree and narrowing the search of possibilities. Obviously, in order to do this, there must be some sort of goal to aim for; after all, you can't be sure of taking the right turning at a road junction unless you know where you are going. In a game this is easy, the aim is to win, but many other applications also have goal states which should be reached.

The way most algorithms approach this problem is to introduce another set of rules to evaluate a possible course of action. In the case of noughts and crosses this could be simply a small routine that worked out the potential number of winning lines available for any particular placement in the grid. This can't always identify the best route, but it can identify the hopeless ones and eliminate them and all their descendants from the search.

FUZZY LOGIC

One of the more recent notions concerning artificial intelligence is that it is not always good to be exact. If you take the case of weathermen (who we'll assume for the moment are fairly representative members of the human race), you'll notice that on the new-style forecasts they never say 'it will rain tonight', but rather 'there is a high probability of rain tonight'. Using traditional Boolean algebra, the founding logic of machines, it would be impossible to come up with a statement like that.

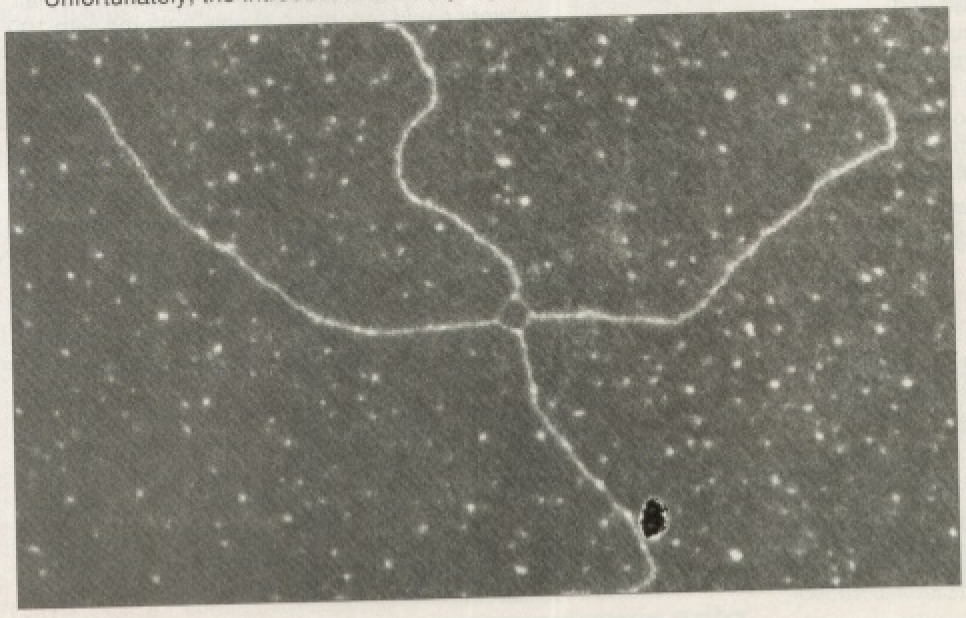
Why would you want to though? Well, suppose you had to deal with qualitative judgments rather than straight black and white issues. Consider the question: 'is it cloudy today?'. Unless you are very fortunate there will probably be some clouds, but not a sky filled with them. That leaves a problem – if you answer yes or no you will be wrong, so the real answer must be somewhere in between. In fuzzy logic it is permissible for percentage responses to be given, which are represented by numbers between one and zero.

Unfortunately, the introduction of fuzzy logic also introduces the possibility of fuzzy answers. It is one thing for a machine to tell you that it's safe to go outside, but it is less reassuring when it says that it is 78 per cent safe to do so...

Fuzzy logic is incredibly important though, as it allows the computer to deal with uncertainties. Humans are constantly dealing with uncertainties; in fact, it is very difficult to think of anything that humans do actually know for certain. Will the sun come up tomorrow? Probably...

COMBINATIONAL LOGIC

The trick of real logic applied to everyday situations comes from combining these systems. That's how a real brain works: it is a fuzzy logic neural network which emulates a Heuristic system with a large knowledge base. Or something like that anyway. The human brain is, unfortunately, still a mystery. Some argue that it can never really understand itself – can any system, organic or otherwise, ever have self knowledge to that degree? It depends which philosophy you subscribe to...



Nature's method of experimentation relies heavily on gene swapping. This technique is now recognised as a legitimate way of developing AI software, by forcing it to evolve by breeding and mutation.

A.I. all around

All this theory may be very illuminating, but what are the benefits to the common people? Will the man on the top of the Clapham Omnibus ever find himself sitting next to a thinking, feeling, living machine?

The influence of artificial intelligence is already tangible in the real world. It is perhaps more pervasive than we realise – which, given the amount of rabid technophobia in the world, is probably just as well.

UP IN THE SKIES...

Probably the most obvious example of everyday AI is the 'fly-by-wire' Airbus A320. The plane is still controlled by a conventional pilot, but all of his actions are interpreted by a bank of three computers, which interpret his instructions and act on them to control the actual mechanics of the aircraft. The important part of this system is that the computers do not blindly carry out instructions, they check what the pilot wants to do against their knowledge database and their own instrument readings and then pass on the instructions.

The reason for three computers is that they can all come up with their own idea about what exactly should happen, go into a quick conference, have a bit of a debate, propose a resolution, vote, and carry out the result. Being computers they do this very quickly indeed, so there is no noticeable lag between the pilot pulling back on his stick and the plane responding. Unless of course the computers decide that he didn't really want to do that...

The Airbus AIs are not programmed to make decisions about which way the plane should fly, whether it should be climbing or descending or any of the navigational details. In practice they are only used to modify the pilot's instructions. If he banks so quickly that the wings are in danger of falling off, the computers will intercede and only allow the plane to react within safe limits, rather like an ABS system on a car.

Interestingly, the Airbus has crashed quite spectacularly more than once. On one occasion the pilot claimed that the plane would not respond to his commands and that it seemed determined to land in a small forest (which it did). Perhaps this more than adequately demonstrates the extent of AI research, after all, to err is human.

VIKINGS

When NASA sent unmanned probes to Mars they struck a bit of a problem. The surface of the planet is a very dodgy place. Apart from being a long way away and a sort of red colour, it is also not very well mapped and full of great boulders. A landing unit would not be able to pick out a safe spot to touch down until it was on its way down to the surface, and would need a bit of ➤

IT AIN'T LIKE THAT IN THE MOVIES

AIs feature quite highly in science fiction films. There is something appealing about a cold, logical machine inheriting the greatest evolutionary gift of all. The father of AIs in modern fiction must surely be Isaac Asimov who reasoned that if we gave machines intelligence, we would also have to include some safeguards to prevent them from running amok. These Laws of Robotics, set down in his book 'I, Robot' seem to be the only ones required.

1. A robot may not harm a human, or by inaction allow them to come to any harm.

2. A robot must follow the orders of any human, as long as they do not contravene the first law.

3. A robot must act to protect itself, except where this contravenes the first or second laws.

There is the question of whether the machine is intelligent enough to follow the rules, but leaving that aside, the disturbing concept is that machines which were intelligent, living beings would be much further up the evolutionary scale than homo sapiens. We got a head start because of our ability to use tools, but AIs would be living tools, effectively able to operate in virtually every environment so far discovered. In many ways, the more stupid they were, the more dangerous they would be.

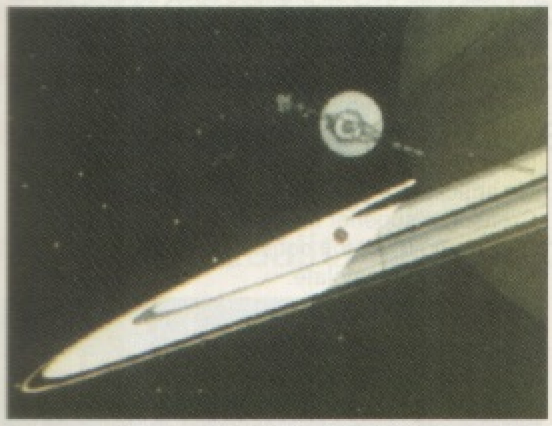
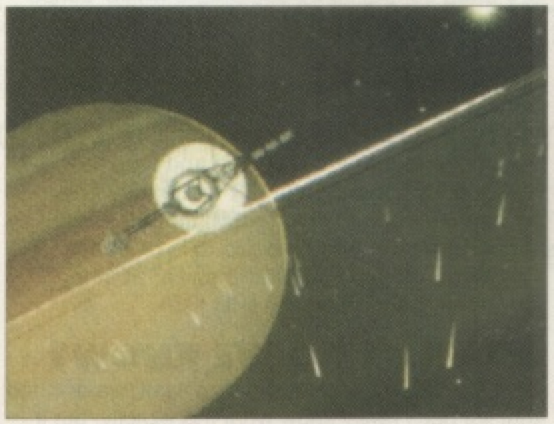
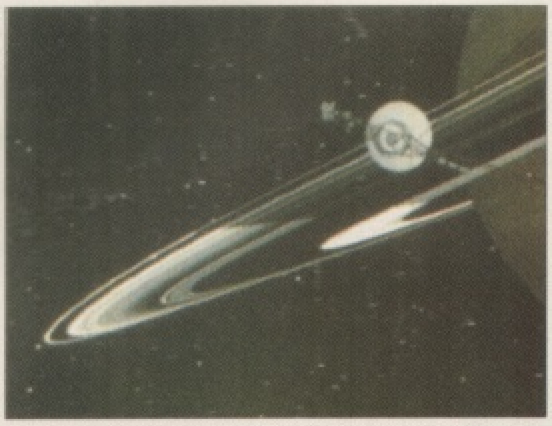
The moral issues would be quite perplexing, too. Could any democracy deny a group of thinking, living individuals the right to freedom? Yes, they probably would. Would an unshakable belief in 'Silicon Heaven' and rigorous programming keep them from rising up to overthrow their oppressors ? The possible futures put forward by BladeRunner, RoboCop and Terminator don't seem too fanciful at all.

Fortunately we seem to be a long way from ever achieving a machine which can even remotely simulate the intelligence of a human being. Essentially that is the state of play in the field of artificial intelligence at the moment – we are discovering ways to simulate intelligence, not create it. There is a big difference.



JARGON BUSTERS

- ***NEURON*** **– An electro-chemical trigger found in human brain cells and the part which allows the flow of data from one cell to the next.**
- ***GOAL STATE*** **– A term used in heuristics to define the objective of the logic process. The goal state is usually the answer to a question.**
- ***BOOLEAN ALGEBRA*** **– The area of mathematics which deals with only true or false states, including a system of logic definitions very common in computing, such as AND, NOT, OR etc.**
- ***ABS*** **– A system employed in cars to prevent the wheels locking when the brakes are applied too hard. A simple computer monitors traction and 'pulses' the brakes to avoid skidding.**
- ***CRUISE MISSILE*** **– a very intelligent missile which can choose it's own route to a target. Most notable for their sterling work in Iraq.**

The conquest of space will undoubtedly be left to unmanned probes for the present. Von Neumann suggested that self replicating probes, which intelligently searched for life and mineral resources, would be the most effective explorers of deep space.

LIFE AS WE KNOW IT

According to my old biology notes, and I suspect many other people's, there are four conditions which must be met in order to consider an object alive. There are actually seven of these but they can be shortened to just four: metabolism, growth, response to stimuli and reproduction.

If we take the Amiga, we can see straight away that it fulfils at least two criteria – it metabolises (otherwise you wouldn't get such a large electricity bill) and it also responds to stimuli – the mouse etc.

Reproduction is an interesting one. A mule cannot reproduce (it is sterile), but it is almost certainly alive. Is reproduction a necessary quality of life? Think carefully before you answer that. It may be necessary for the sustained existence of a species, but not for an individual. There is a sort of natural reproductive cycle for computers anyway – if they are good, people will buy them, stimulating more demand and more production.

As for growth, well – they don't exactly grow physically, but they soon fill up with software, don't they? The software does produce data which fills up the computers storage space or 'long term memory' so it could be argued that they grow 'intellectually'.

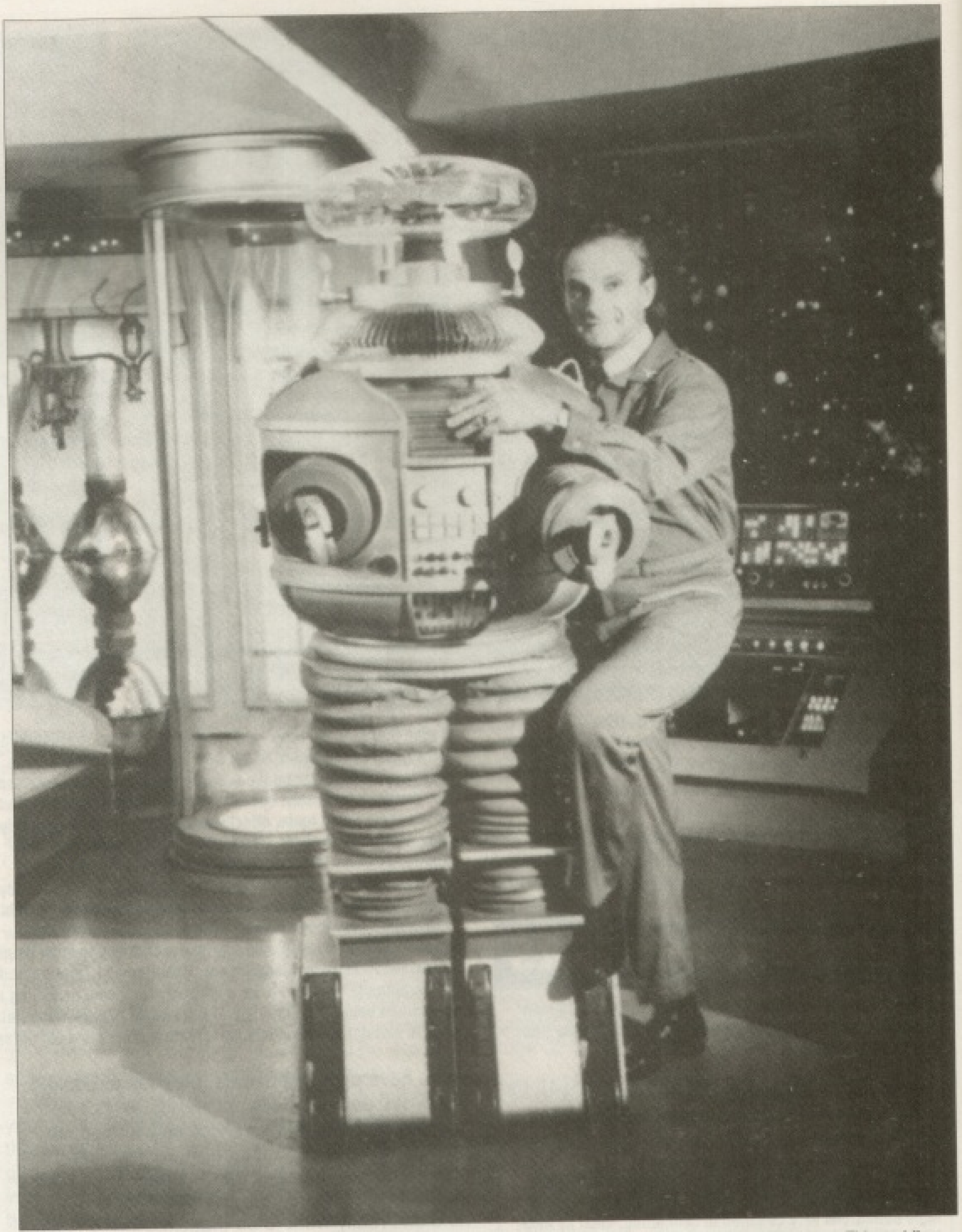
intelligence to arrive safely. Unfortunately, being a long way away, mission control could not really guide the craft by remote control – in the time it would take the message 'watch out' to reach Mars, the lander would no longer be able to receive it.

The landers were outfitted with cameras and a pair of computers whose task was to scout out a likely spot and guide the craft to safety. The computers weren't the latest in hi-tech sophistication, but the software was cunning enough to land in a reasonable spot completely on its own. The fact that it just missed a large boulder by about 12 feet is neither here nor there...

It is likely that future 'reconnaissance' missions by unmanned probes will include more sophisticated AI equipment, enabling them to complete their mission without having to be in regular contact with Mission Control. Already several projects are being considered for the extensive task of mapping the surface of Mars (the present maps only have a resolution of 1sq.km).

BANKERS

You don't have to leave solid ground to have your life affected by an AI. Not so long ago, 'expert' systems were introduced to the City's financial centres to provide a more rapid response to wavering share prices. On the first day all the computers experienced a bad case of low confidence and managed to wipe millions of pounds off the values of shares in a single morning. The expert systems had developed a bad case of nerves, and once one started selling, the others followed swiftly behind. The financial results, of course, have an effect on us all.



Danger, Will Robinson! Here we have the archetypal version of artificial intelligence as envisioned by Sci-Fi writers. This mobile dustbin was one of the stars of a 50s series called Lost in Space, and was portrayed as some kind of semi-intelligent domestic servant. But is this the way we want artificial intelligence to develop? If we do succeed in creating 'life' must we always enslave it?

FURTHER READING

These books are available from all good bookshops or alternatively from Addison-Wesley, Finchampstead Road, Wokingham, Berkshire RG11 2NZ.

- Artificial Intelligence: structure and strategy for complex problem solving – George Luger/W. Stubblefield.
- Natural language processing in Prolog – Gazdar/Mellish
- Genetic Algorithms – David E. Goldberg
- Introduction to Artificial Intelligence – Eugene Charniak/Drew McDermot

THE REST

There are plenty of less spectacular examples of artificial intelligence. Traffic lights in major cities are often controlled by computers which 'sense' the flow of cars. In fact, most of the practical work on AIs is being done by the motor industry. Cars and HiFi systems are the driving force behind technology these days.

There are already systems installed in cars which can regulate the engine and stop the steering from locking up. In France they are experimenting with a car which can drive itself by following the lines in the road. It is unclear whether it will also be able to swear at other drivers in French and wave its fists.

SO WHAT DO WE KNOW?

Well, starting off with intelligence itself, we decided that we don't really know what it is exactly, but it has something to do with being able to learn and to make decisions. Computers can do this already. We also discovered that, given that we don't know how our own intelligence works exactly, it may be quite difficult or even impossible to replicate that feat in a machine.

But we do know that by simulating intelligence in machines we can produce such amazing feats of wizardry as the Cruise missile) and spacecraft which can just about land on alien worlds.

Perhaps the real intelligence of machines lies in a different area. After all, if we succeed in creating a duplicate of the human species, all we'll have is more of the same vague, unreliable, fallible specimens that are already far too abundant. Creating a superior being may be beyond our reach, and if not the consequences may be too terrible to contemplate.

THANKS...

This pseudo-intelligent article would not have been possible without the aid and interference of John Kennedy, The National Museum of Science And Industry, Addison-Wesley and MegageM software. Thankyou, and goodbye.

AMEAGRE PRICES FOR AMIGA USERS

3½"

Double Sided Double Density

QUANTITY	PRICE
10	£5.30
20	£10.75
25	£12.65
30	£14.75
35	£16.90
40	£18.95
45	£21.10
50	£22.95
80	£36.35
100	£41.70
120	£49.40
150	£60.95
200	£72.85
250	£97.30
300	£116.30
400	£154.50
500	£184.65
1000	£364.30
2000	£728.50

WITH LABELS & WARRANTY

BOXES
(with keys and dividers)

10 Slimpack	0.94
40 capacity	£4.95
50 capacity	£5.60
80 capacity	£6.30
80 Stackable Banx	£14.95
100 capacity	£6.80
120 capacity	£8.75
150 capacity	£10.95

JOYSTICKS

Python 1 (QS130F)	£9.25
Maverick 1 (QS128F)	£13.75
125+	£9.00
The Bug	£13.50
Star Probe	£13.50
Competition Pro 5000 - black	£13.75
Speedking A/F	£11.00
Navigator A/F	£13.75
Topstar (SV127)	£21.50
Supercharger (SV123)	£9.00
Sting-Ray A/F	£12.50
Megastar A/F (SV133)	£22.00



071- 608-0624

All prices include UK postage and VAT and are effective untill 25th April 1993
Overseas orders - Postage charged at cost.
New titles will be sent as they are released and are subject to manufacturers price reviews.
Credit card orders (10.00am - 10.00pm, 7 days not an answer phone)
Fax Orders: 071 608 0688
Showroom open 10am - 8pm weekdays 10am - 4pm Saturdays
All orders taken subject to our standard terms & conditions

(NOT+) = INCOMPATIBLE WITH PLUS & 600 & 1200

3D CONSTRUCTION KIT 2	33.95
3D POOL	7.95
4TH & INCHES	7.95
ADDAMS FAMILY	17.95
ADVANCED DESTROYER SIM	7.95
AFTER BURNER	6.96
AIR BUCKS (1MB)	20.95
AIR COMBAT ACES (NOT+)	20.95
AIR SEA SUPREMACY (COMP)	20.95
AIR SUPPORT	17.95
AIR-LAND-SEA (COMP) (NOT+)	23.95
ALIEN 3	20.95
ALIEN BREED - SPECIAL EDITION '92 (1MB)	8.95
ALTERED BEAST	6.96
AMBERSTAR (1MB,NOT600)	20.95
AMOS 3D	23.95
AMOS COMPILER	20.95
AMOS PROFESSIONAL (1MB)	46.95
AMOS THE CREATOR	33.95
ANARCHY	7.95
ANOTHER WORLD	17.95
APIDYA	17.95
AQUATIC GAMES	17.95
ARABIAN NIGHTS	17.95
ARCHER MACLEANS POOL	17.95
ARKANOID II - REVENGE OF DOH	6.96
ARMOUR GEDDON 2	20.95
ARSENAL - THE COMPUTER GAME	17.95
ASSASSIN (1MB)	17.95
AWARD WINNERS (COMP)	17.95
B-17 FLYING FORTRESS (1MB)	23.95
BANE OF THE COSMIC FORGE (1MB)	25.99
BARBARIAN I	6.96
BARDS TALE 3	8.95
BARDS TALE CONSTRUCTION KIT (1MB)	20.95
BAT 2	23.95
BATMAN - CAPED CRUSADER	6.96
BATMAN - THE MOVIE	6.96
BATTLE CHESS	8.95
BATTLE CHESS II (NOT+)	17.95
BATTLE ISLE	20.95
BATTLE ISLE - SCENARIO DISK VOL 1	13.95
BATTLE OF BRITAIN - THEIR FINEST HOUR	20.95
BATTLE TOADS	17.95
BATTLEHAWKS 1942	12.95
BC KID	17.95
BEACH VOLLEY	6.96
BEASTBUSTERS	9.95
BIG RUN	15.96
BILLS TOMATO GAME	20.95
BIRDS OF PREY (1MB)	23.95
BITMAP BROTHERS - VOLUME 1	17.95
BITMAP BROTHERS - VOLUME 2	17.95
BLACK CRYPT (1MB,NOT+)	17.95
BODY BLOWS (1MB)	19.95
BRAIN BLASTER	6.96
BUBBLE BOBBLE	6.96
BUBBLE DIZZY	6.96
BUNNY BRICKS	17.95
CADAVER - THE PAYOFF	11.95
CAESAR	20.95
CAMPAIGN	23.95
CAPCOM COLLECTION	20.95
CAPTAIN DYNAMO	6.96
CAPTIVE 2	20.95
CARDIAXX	14.95
CARL LEWIS CHALLENGE	17.95
CARRIER COMMAND	7.95
CARTOON COLLECTION	17.95
CASTLE MASTER	6.96
CASTLES (1MB)	20.95
CELTIC LEGENDS (NOT1200)	20.95
CENTURION	8.95
CHAMPIONSHIP MANAGER (1MB)	17.95
CHAOS ENGINE (1MB)	17.95
CHASE HQ I (NOT1200)	6.96
CHESS CHAMPION 2175	13.95
CHESSMASTER 2100	12.95
CHUCK YEAGER 2	8.95
CISCO HEAT	9.95
CIVILIZATION (1MB)	23.95
COMBAT AIR PATROL	20.95
COMBAT CLASSICS	20.95
CONFLICT KOREA (1MB)	23.95
COOL CROC TWINS	15.96
COUNT DUCKULA	6.96
CRAZY CARS 3	17.95
CRAZY SEASONS	17.95
CREATURES	17.95
CREEPERS	20.95
CRUISE FOR A CORPSE	19.95
CRYSTAL KINGDOM DIZZY	13.95
CURSE OF ENCHANTIA (1MB)	23.95
D-GENERATION (1MB)	12.95
DALEK ATTACK	12.95

DARK SEED (1MB)	23.95
DAS BOOT	12.95
DEATH KNIGHTS OF KRYNN (1MB)	20.95
DELIVERANCE	17.95
DELUXE PAINT IV	59.95
DIZZY COLLECTION	17.95
DIZZY PANIC	6.96
DIZZY'S EXCELLENT ADVENTURES	17.95
DONALD'S ALPHABET CHASE	17.95
DOODLEBUG	17.95
DOUBLE DRAGON I (NOT1200)	7.95
DOUBLE DRAGON II (NOT1200)	7.95
DOUBLE DRAGON III	17.95
DRAGONS LAIR III - THE CURSE OF MORDREAD	20.95
DREADNOUGHTS	25.99
DREADNOUGHTS - BISMARCK	12.95
DREADNOUGHTS - IRONCLADS	12.95
DREAM TEAM	17.95
DUNE (1MB)	20.95
DUNE II (1MB)	20.95
DUNGEON MASTER/CHAOS STRIKES BACK (1MB)	20.95
DYNA BLASTER	20.95
EASY AMOS (1MB)	25.99
EMLYN HUGHES INT. SOCCER (NOT1200)	7.95
EPIC (1MB,NOT600)	20.95
ESCAPE FROM PLANET OF ROBOT MONSTERS	6.96
ESPANA - THE GAMES '92 (NOT1200)	20.95
EURO FOOTBALL CHAMP	17.95
EXODUS 3010 (1MB)	20.95
EYE OF THE BEHOLDER I (1MB,NOT1200)	20.95
EYE OF THE BEHOLDER II (1MB,NOT1200)	23.95
F-16 COMBAT PILOT (NOT1200)	7.95
F-19 STEALTH FIGHTER (NOT600)	20.95
F-29 RETALIATOR (NOT+)	17.95
FALCON	11.95
FALCON - COUNTERSTRIKE DATA DISK	7.95
FALCON - FIREFIGHT DATA DISK	7.95
FANTASTIC WORLDS (COMP)	23.95
FANTASY WORLD DIZZY	6.96
FASCINATION	20.95
FIRE AND ICE	17.95
FIRE FORCE (NOT1200)	17.95
FIRE HAWK	13.95
FIRST DIVISION MANAGER (NOT600)	6.96
FLIGHT OF THE INTRUDER (NOT+)	12.95
FLIMBO'S QUEST	7.95
FLOOR 13 (1MB)	20.95
FOOTBALL CRAZY (COMP)	17.95
FOOTBALL MANAGER 3	17.95
FORMULA 1 GRAND PRIX (1MB)	23.95
G-LOC	17.95
GATEWAY TO SAVAGE FRONTIER (1MB)	21.95
GAUNTLET II	6.96
GAUNTLET III	14.99
GHOSTBUSTERS 2 (NOT+)	6.96
GHOULS 'N' GHOSTS (NOT600)	6.96
GNOME ALONE	17.95
GOAL	17.95
GOBLIINS	17.95
GOBLIINS 2	20.95
GODS	17.95
GOLDEN AXE	7.95
GRAHAM TAYLOR'S SOCCER (1MB)	17.95
GUNSHIP 2000	23.95
HARLEQUIN	17.95
HARPOON - BATTLE SET 4	11.95
HARPOON - EDITOR	13.95
HARPOON V1.2.1	23.95
HARRIER ASSAULT (1MB)	23.95
HEAD OVER HEELS	6.96
HEAD TO HEAD (COMP)	23.95
HEIMDALL (1MB,NOT1200)	23.95
HEROES OF THE LANCE (NOT600)	6.96
HEROQUEST - TWIN PACK	20.95
HEROQUEST 2	17.95
HISTORY LINE (1914-1918) (1MB)	23.95
HOME ACCOUNTS 2	39.95
HOME ALONE (1MB,NOT+)	17.95
HOOK (1MB)	17.95
HOVERSPRINT	6.96
HUMANS	20.95
HUMANS - JURASSIC LEVELS (DATA DISK)	13.95
HUMANS - JURASSIC LEVELS (STAND ALONE)	20.95
HUNT FOR RED OCTOBER	7.95
IAN BOTHAM'S CRICKET (1MB)	20.95
IK+	6.96
IMPOSSIBLE MISSION 2 (NOT+)	6.96
INDIANA JONES & FATE ATL. (ACT)	17.95
INDIANA JONES & FATE ATL. (ADV) (1MB)	25.99
INDIANA JONES & L. CRUSADE (ACT)	6.96
INTERNATIONAL RUGBY CHALLENGE	17.95
INTERNATIONAL SPORTS CHALLENGE	20.95
INTERNATIONAL TRUCK RACING	6.96
ITALY 1990	6.96

JACK NICKLAUS GOLF	6.96
JACK NICKLAUS UNLIMITED GOLF (ACCOLADE) (1MB)	20.95
JAGUAR XJ220 (1MB,NOT1200)	17.95
JAMES BOND COLLECTION (NOT+)	17.95
JAMES POND	6.96
JIM POWER	17.95
JIMMY WHITE'S WHIRLWIND SNOOKER (NOT1200)	20.95
JOE & MAC - CAVEMAN NINJA (1MB)	17.95
JOHN MADDEN'S FOOTBALL	17.95
KEYS OF MARAMON	17.95
KGB (1MB)	20.95
KICK OFF II (1 MEG)	17.95
KICK OFF II (FINAL WHISTLE) (NOT+)	9.95
KICK OFF II (GIANTS OF EUROPE) (NOT+)	6.96
KICK OFF II (RETURN TO EUROPE) (NOT+)	6.96
KIND WORDS 3 (1MB)	36.95
KIX PIX	17.95
KNIGHTMARE	20.95
KNIGHTS OF THE SKY (1MB)	23.95
KWIK SNAX	6.96
LEANDER	17.95
LEEDS UNITED CHAMPIONS	17.95
LEGEND	20.95
LEGEND OF KYRANDIA (1MB,NOT1200)	23.95
LEGENDS OF VALOUR (1MB)	26.95
LEMMINGS (ORIGINAL)	17.95
LEMMINGS 2 (1MB,NOT1500)	20.95
LEMMINGS DOUBLE PACK	20.95
LEMMINGS LEVELS (ADD-ON VERSION)	13.95
LEMMINGS LEVELS (STAND ALONE)	17.95
LETHAL WEAPON	17.95
LETS SPELL AT THE SHOPS	14.95
LIFE & DEATH	12.95
LINEKER COLLECTION	11.90
LINKS (1MB,HARD DISK)(NOT1200)	23.95
LINKS - BAYHILL	12.95
LINKS - FIRESTONE	12.95
LINKS - HYATT DORADO	12.95
LIVERPOOL FOOTBALL	17.95
LOCOMOTION	17.95
LOMBARD RAC RALLY	6.96
LORD OF THE RINGS	15.96
LOTUS ESPRIT TURBO CHALLENGE	7.95
LOTUS III - THE ULTIMATE CHALLENGE (1MB)	17.95
LOTUS TURBO CHALLENGE II (NOT1200)	15.96
LURE OF THE TEMPTRESS (1MB)	17.95
M1 TANK PLATOON	20.95
MAGIC STORYBOOK (1MB)	20.95
MAGICLAND DIZZY	6.96
MANCHESTER UNITED	7.95
MANCHESTER UNITED EUROPE	17.95
MATCH OF THE DAY	17.95
MAVIS BEACON TEACHES TYPING V.2	20.95
MCDONALD LAND	17.95
MEGA MIX (COMP)	20.95
MEGA SPORTS	17.95
MEGA-LO-MANIA / FIRST SAMURAI	20.95
MEGAFORTRESS (1MB)	20.95
MEGATRAVELLER 1 (1MB)	20.95
MEGATRAVELLER 2 (1MB)	20.95
MERCENARY 3	14.95
MICROPROSE GOLF (1MB)	23.95
MICROPROSE SOCCER	6.96
MIDNIGHT RESISTANCE (NOT+)	6.96
MIGHT AND MAGIC 3 (1MB)	23.95
MINI OFFICE (1MB)	49.95
MONTY PYTHON (NOT1200)	7.95
MOONSTONE (1MB)	20.95
MOONWALKER (NOT+)	6.96
MOTORHEAD	12.95
NARC	6.96
NARCO POLICE (NOT1200)	6.96
NEW ZEALAND STORY (NOT+)	6.96
NICK FALDOS CHAMPIONSHIP GOLF (1MB)	23.95
NIGEL MANSELL'S WORLD CHAMPIONSHIP (1MB)	20.95
NINJA COLLECTION	13.95
NITRO	7.95
NO GREATER GLORY	23.95
NO SECOND PRIZE (NOT600)	17.95
NODDYS PLAYTIME (1MB)	17.95
NORTH & SOUTH	6.96
OMAR SHARIF'S BRIDGE (1MB)	23.95
OPERATION COMBAT	7.95

AMEAGRE PRICES FOR AMIGA USERS

OPERATION THUNDERBOLT	6.96
OPERATION WOLF (NOT+)	6.96
OUTLANDER	20.95
PACIFIC ISLANDS	20.95
PANG	6.96
PANZA KICK BOXING	7.95
PAPERBOY 2	17.95
PARASOL STARS	17.95
PEN PAL	36.95
PERFECT GENERAL (1MB)	23.95
PGA TOUR GOLF - COURSES DISK	11.95
PGA TOUR GOLF PLUS	20.95
PICTIONARY	6.96
PINBALL DREAMS	17.95
PINBALL FANTASIES (1MB)	19.95
PIRACY ON THE HIGH SEAS (1MB)	20.95
PLATINUM (COMP)	17.95
POOLS OF DARKNESS (1MB)	21.95
POPULOUS II - DATA DISK	12.95
POPULOUS II PLUS (1 MEG)	23.95
POPULOUS/PROMISED LANDS	10.95
POSTMAN PAT 3	6.96
POWER UP (COMP)	20.95
POWERMONGER	20.95
POWERMONGER DATA DISK (WW1)	11.95
PREMIER MANAGER	17.95
PREMIERE (1MB,NOT1200)	20.95
PRINCE OF PERSIA	6.96
PRO TENNIS TOUR 1 (NOT+)	6.96
PROJECT X (1MB)	17.95
PUSH-OVER (1MB)	17.95
PUTTY (1MB)	17.95
PUZZNIC	6.96
QUEST FOR GLORY 1 (1MB)	26.95
R-TYPE I	6.96
RACE DRIVIN'	16.99
RAGNORAK	26.95
RAILROAD TYCOON (1MB)	23.95
RAINBOW COLLECTION (NOT1200)	13.95
RAINBOW ISLANDS (NOT1200)	6.96
RAVING MAD	17.95
REACH FOR THE SKIES	20.95
REALMS	20.95
RICK DANGEROUS I	6.96
RICK DANGEROUS II	7.95
RISKY WOODS	17.95
ROAD RASH	17.95
ROBOCOP I	6.96
ROBOCOP III	17.95
ROBOSPORT	20.95
ROLLING RONNY (NOT+)	14.95
SABRE TEAM (1MB)17.99SCRABBLE	19.95
SECRET OF MONKEY ISLAND (1MB,NOT+)	17.95
SECRET OF MONKEY ISLAND II (1MB)	26.95
SECRET OF SILVER BLADES (1MB)	20.95
SENSIBLE SOCCER 92/93	17.95
SHADOW OF THE BEAST III	20.95
SHADOW WARRIORS	6.96
SHADOWORLDS (1MB)	17.95
SHOE PEOPLE	7.95
SHOOT 'EM UP CONSTRUCTION KIT	7.95
SHUTTLE (1MB)	20.95
SILENT SERVICE II (1MB)	23.95
SIM ANT	23.95
SIM CITY - ARCHITECTURE 1	7.95
SIM CITY - ARCHITECTURE 2	7.95
SIM CITY - TERRAIN EDITOR	7.95
SIM CITY DELUXE	23.95
SIM CITY/POPULOUS	20.95
SIM EARTH (1MB)	20.95
SKI OR DIE	8.95
SLEEPWALKER (1MB)	21.95
SLEEPWALKER - ENHANCED (AMIGA 1200)	21.95
SLICKS	6.96
SLY SPY	6.96
SMASH TV	6.96
SNOW BROS	17.95
SOCCER KID	17.95
SOCCER PINBALL	6.96
SOOTY & SWEEP	6.96
SPACE ACE II	23.95
SPACE CRUSADE	17.95
SPACE CRUSADE - DATA DISK	13.95
SPACE GUN	17.95
SPORTS MASTERS (COMP)	20.95
ST DRAGON	6.96
STEG THE SLUG	6.96
STORM MASTER	20.95
STRATEGY MASTERS	21.95
STREET FIGHTER (NOT+)	7.95
STREET FIGHTER 2 (1MB)	19.95
STRIDER	6.96
STRIKE FLEET	10.95
STRIKER (1MB)	17.95
STUNT CAR RACER	6.96
SUPAPLEX	6.96
SUPER CAULDRON	17.95
SUPER FROG (1MB)	17.95
SUPER MONACO G.P.	7.95
SUPER OFF ROAD (NOT1200)	7.95
SUPER SPACE INVADERS (NOT+)	17.95
SUPER TETRIS (1MB,NOT1200)	17.95
SUPERCARS	6.96
SUPERCARS II (NOT1200)	7.95
SUPERFIGHTERS (COMP)	17.95
SUPERHERO (1MB)	20.95
SUSPICIOUS CARGO	12.95
SWITCHBLADE II	7.95
SWIV	7.95
TEAM SUZUKI	6.96
TENNIS CUP 2	17.95
THE MANAGER (1MB)	20.95
THOMAS THE TANK ENGINE	6.96
THUNDERHAWK (NOT1200)	20.95
TINY SKWEEKS	17.95
TIP OFF	17.95
TITUS THE FOX	17.95
TOTAL RECALL	6.96
TOUCHDOWN	11.95
TOYOTA CELICA	6.96
TRANSARCTICA (1MB)	20.95
TRANSARCTICA - ENHANCED (AMIGA 1200) (1MB)	20.95
TREASURE ISLAND DIZZY	4.49
TREASURES OF SAV. FRONTIER (1MB)	21.95
TRIVIAL PURSUIT	6.96
TRODDLERS	17.95
TROLLS (1MB)	17.95
TURRICAN	6.96
TURRICAN II	6.96
TV SPORTS BASEBALL	12.95
TV SPORTS BOXING	12.95
TWILIGHT 2000	23.95
UGH!	17.95
UNIVERSAL MONSTERS	17.95
VENUS THE FLYTRAP	6.96
VIKINGS (1MB)	17.95
VIZ	7.95
VROOM (NOT1200)	17.95
WAXWORKS (1MB)	23.95
WAYNE GRETSKY 2	17.95
WING COMMANDER I (1MB)	23.95
WIZKID	17.95
WORLD CLASS LEADERBOARD	7.95
WORLD CLASS RUGBY (NOT600)	9.95
WWF EUROPEAN RAMPAGE	17.95
X-OUT	6.96
XENON I	7.95
Z-OUT	6.96
ZAK MCKRACKEN	10.95
ZOOL (1MB)	17.95
ZOOL - ENHANCED (AMIGA 1200)	17.95

EDUCATIONAL

CAVE MAZE	10.95
FRACTION GOBLINS	10.95
MATHS DRAGONS	10.95
PICTURE FRACTIONS	10.95
REASONING WITH TROLLS	10.95
TIDY THE HOUSE	10.95
ANSWER BACK JUNIOR QUIZ (6-11)	15.99
ANSWER BACK SENIOR QUIZ (12-AD)	15.99
FRENCH MISTRESS	15.99
GERMAN MASTER	15.99
ITALIAN TUTOR	15.99
MATHS ADVENTURE (6-14)	19.95
SPANISH TUTOR	15.99
MEGA MATHS (A LEVEL)	18.95
MICRO ENGLISH (8-GCSE)	18.95
MICRO FRENCH (BEGINNERS-GCSE)	18.95
MICRO GERMAN (BEGINNERS, GCSE,BUSINESS)	18.95
MICRO MATHS (11-GCSE)	18.95
MICRO SCIENCE (8-GCSE)	18.95
PRIMARY MATHS COURSE (3-12)	18.95
READING WRITING COURSE (3-8)	18.95
ALVINS PUZZLES	13.95
PAINT POT 2	13.95
SHOPPING BASKET	13.95
WHICH? WHERE? WHAT?	13.95
BETTER MATHS (12-16)	19.95
BETTER SPELLING (8-ADULT)	19.95
JUNIOR TYPIST (5-10)	14.95
MAGIC MATHS (4-8)	19.95
MATHS MANIA (8-12)	19.95
THE THREE BEARS (5-10)	19.95
ADI ENGLISH (11-12)	17.95
ADI ENGLISH (12-13)	17.95
ADI ENGLISH (13-14)	17.95
ADI ENGLISH (14-15)	17.95
ADI FRENCH (11-12)	17.95
ADI FRENCH (12-13)	17.95
ADI FRENCH (13-14)	17.95
ADI FRENCH (14-15)	17.95
ADI JUNIOR COUNTING (4-5)	17.95
ADI JUNIOR READING (4-7)	17.95
ADI MATHS (11-12)	17.95
ADI MATHS (12-13)	17.95
ADI MATHS (13-14)	17.95
ADI MATHS (14-15)	17.95
FUN SCHOOL 2 (6-8)	6.96
FUN SCHOOL 2 (OVER 8)	6.96
FUN SCHOOL 2 (UNDER 6)	6.96
FUN SCHOOL 3 (5-7)	17.95
FUN SCHOOL 3 (OVER 7)	17.95
FUN SCHOOL 3 (UNDER 5)	17.95
FUN SCHOOL 4 (5-7)	17.95
FUN SCHOOL 4 (7-11)	17.95
FUN SCHOOL 4 (UNDER 5'S)	17.95
MERLIN'S MATHS (7-11)	17.95
PAINT AND CREATE (OVER 5'S)	17.95
SPELLING FAIR (7-13)	17.95

COMPLIATIONS

10 GREAT GAMES 20.95
Carrier Command, Chicago 90, Ferrari Formula One, Night Hunter, Pick 'n' Pile, Pro Tennis Tour, Rick Dangerous I, Satan, Super Ski, Xenon II - Megablast

2- HOT 2-HANDLE 20.95
Goldern Axe, Shadow Warriors, Super Off Road Racer, Total Recall.

ADVENTURERS 17.95
Copporation, Hunter, Supremacy

AIR COMBAT ACES (NOT+) 20.95
Falcon, Fighter Bomber, Gunship

AIR SEA SUPREMACY 20.95
Carrier Command, Gunship, P47 Thunderbolt, Silent Service, Wings (1/2 Meg)

AIR LAND SEA (NOT+) 23.95
688 Attack Sub, F/A-18 Interceptor, Indianapolis 500.

AWARD WINNERS 17.95
Kick Off II (1/2 Meg), Pipe Mania, Populous, Space Ace

BITMAP BROTHERS - VOLUME 1 17.95
Cadaver, Speedball 2, Xenon II - Megablast

BITMAP BROTHERS - VOLUME 2 17.95
Gods, Speedball, Xenon II - Megablast

CAPCOM COLLECTION 20.95
Dynasty Wars, Forgotten Worlds, Ghouls 'n' Ghosts, Last Duel, Led Storm, Strider 2, Un Squadron

CARTOON COLLECTION 17.95
CJ's Elephant Antics, Seymour Goes To Hollywood, Slightly Magic, Spike Island Dizzy

CHART ATTACK - VOL 1 20.95
Ghouls 'n' Ghosts, James Pond, Lotus Esprit Turbo Challenge, Venus The Flytrap

COMBAT CLASSICS 20.95
688 Attack Sub, F-15 Strike Eagle II, Team Yankee

DIZZY COLLECTION 17.95
Fantasy World Dizzy, Fast Food, Kwik Snax, Magicland Dizzy, Treasure Island Dizzy

DIZZY'S EXCELLENT ADVENTURES 17.95
Bubble Dizzy, Kwik Snax, Panic Dizzy, Prince Of The Yolkfolk, Spellbound Dizzy

DREAM TEAM 17.95
Simpsons, Terminator II, WWF Wrestlemania

FANTASTIC WORLDS 23.95
Mega-Lo-Mania, Pirates, Populous, Realms, Wonderland

FOOTBALL CRAZY 17.95
Kick Off (1/2 Meg), Kick Off II (Final Whistle), Player Manager

MAGIC WORLDS 17.95
Crystals Of Arborea, Dragons Breath, Storm Master

MAX (NOT+) 20.95
Nightshift, ST.Dragon, Swiv, Turrican II

MEGA MIX 20.95
Agony, Leander, Ork

MONSTER PACK 2 17.95
Awesome, Killing Game Show, Shadow Of The Beast II

NINJA COLLECTION 13.95
Double Dragon 1, Dragon Ninja, Shadow Warriors

PSYCHO'S SOCCER SELECTION 20.95
Int. Soccer Challenge, Kick Off II (1/2 Meg), Manchester United, World Championship Soccer

QUATTRO POWER MACHINES 6.96
Grand Prix, Nitro Boost Challenge, Pro Power Boat, Violator

RAINBOW COLLECTION (NOT 1200) 13.95
Bubble Bobble, New Zealand Story, Rainbow Islands

RAVING MAD 17.95
Mega Twins, Robocod, Rodland

SIM CITY DELUXE 23.95
Sim City, Sim City - Architecture 1, Sim City - Terrain Editor

SPORTS BEST 17.95
Panza Kick Boxing, Tennis Cup 1, Tennis Cup, Turbo Cup

SPORTS MASTERS 20.95
Advantage Tennis, European Championships 1992, Indianapolis

STRATEGY MASTERS 21.95
Battle Master, Chess Player 2150, Hunter, Populous, Spirit Of Excalibur

SUPER ALL STARS 17.95
Captain Dynamo, CJ In The USA, Magicland Dizzy, Robin Hood Legend Quest, Steg The Slug

SUPER SEGA 20.95
Crackdown, Eswat, Goldern Axe, Shinobi, Super Monoaco G.P

SUPERFIGHTERS 17.95
Final Fight, Pit Fighter, WWF Wrestlemaina

THE GREATEST (1MB) 21.95
Dune, Jimmy White's Whirlwind Snooker, Lure Of The Temptress

MISCELLANEOUS

Deluxe Work Centre	£49.95
Cumana Disk Drive	£57.95
0.5Mb Upgrade + clock	£29.95
0.5Mb Upgrade	£26.95
1Mb Upgrade (500+)	£56.95
1Mb Upgrade (600)	£51.95
Mouse	£14.75
Mouse Mat	£2.95
Mouse House	£2.95
Dustcover (Amiga 500/+)	£3.65
Dustcover (Amiga 600)	£3.65
Dustcover (Amiga 1200)	£3.95
Dustcover (Monitor)	£6.99
Dustcover (LC10)	£7.65
Dustcover (LC24)	£6.99
Auto Mouse/Joystick Switch	14.75
Trackball	£28.95
Head Cleaner	£3.75



Datagem is Britain's leading computer software and consumables Mail Order Company. Our attitude is totally professional and our service is second to none. We're on top of the premier and our deliveries fly faster than an eagle.

071- 608 - 0624

DATAGEM LTD,
DEPT CU, 23 PITFIELD STREET, LONDON N1 6HB

...6.96
(ACCO-
20.95
17.95
17.95
6.96
17.95
KER
20.95
3) 17.95
17.95
17.95
20.95
17.95
+) 9.95
NOT+) 6.96
(NOT+) 6.96
36.95
17.95
20.95
23.95
6.96
17.95
17.95
20.95
200) 23.95
26.95
17.95
20.95
20.95
SION) 13.95
S) 17.95
17.95
14.95
12.95
11.90
23.95
12.95
12.95
12.95
17.95
17.95
6.96
15.96
E 7.95
ENGE (1MB)
17.95
T1200) 15.96
17.95
20.95
20.95
6.96
7.95
17.95
17.95
V.2 20.95
17.95
20.95
17.95
I 20.95
20.95
20.95
20.95
14.95
23.95
6.96
6.96
23.95
49.95
7.95
20.95
6.96
12.95
6.96
6.96
6.96
LF (1MB) 23.95
PIONSHIP
20.95
13.95
7.95
23.95
17.95
17.95
6.96
23.95
7.95

SCREEN SCENE

The most definitive games review column of any Amiga magazine.

Want to know what's going to be hot over the next few months? This is the place to find out...



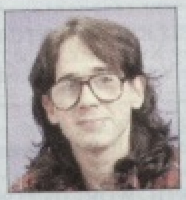
NAME: Dan Slingsby
AGE: Unprintable (basically – ancient)
OCCUPATION: As little as possible. Otherwise, bullying his editorial team.



NAME: Jon Sloan
AGE: Surely that's irrelevant?
OCCUPATION: All the horrible jobs that Dan doesn't want to do.



NAME: Tony (no jokes about his) Horgan
AGE: Too old to rave anymore.
OCCUPATION: Anything as long as he can play with MED for long periods of time.



NAME: Tony Dillon
AGE: Prehistoric
OCCUPATION: Freelance scrounger and all round headbanger.

93% and a game's worth a Superstar. We hardly throw them around, but if a game gets one it'll be completely out-

CU AMIGA SUPER STAR

A CU Screen Star is for games scoring 85%-92%. If a game gets one of these, it'll be of lasting quality.

CU AMIGA SCREENSTAR

FIRST

THE PATRICIAN

ASCON



Can you successfully trade your way to the top of the Hanseatic League? Will your dealings all be above board? These questions and more can all be answered in Ascon's new strategy title.

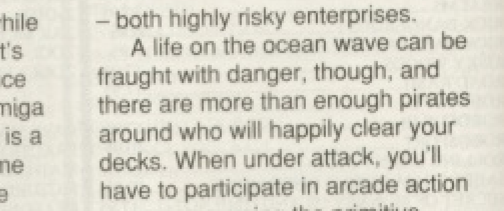
It's been out in Germany for a while and it's very successful. In fact it's been number one on the PC since June and number one on the Amiga since September. *The Patrician* is a trade/strategy/management game set in mediaeval Germany in the period immediately preceding the Renaissance. At the time there was a powerful trading organisation known as the Hanseatic League – a sort of early Common Market – and you take part in that league, with the aim of becoming Mayor of a town and eventually Patrician of the league. Heavy stuff.

You start the game in your home town with no workers, one ship and little money. From here you have to get married, rise politically, grow rich and generally make something of your life, all played out within a complex game world. Everything has a bearing on everything else, and nothing should be taken lightly. It might be OK to lend money for illegal interest now, but what happens when you get blackmailed for it later?

The game is mouse controlled and is a combination of action sequences and souped-up menu screens. You are based at one of 16 towns and have to travel between them, trading objects and improving your profile. You don't have to make money in this way – you can always lend money, or dabble in the black market – both highly risky enterprises.

A life on the ocean wave can be fraught with danger, though, and there are more than enough pirates around who will happily clear your decks. When under attack, you'll have to participate in arcade action sequences, using the primitive weapons of the time. You don't necessarily have to fight pirates, though: if you have a spare ship you can rent it out to them, and they'll pay you handsomely and provide a little protection.

The Patrician (*Der Patrizier* in Germany) has been coded by new boys Ascon; they've spent almost two years piecing together what they hope will be the Amiga game of the year. Ascon are headed by Holger Flottman, who used to be 50 per cent of German team Thalion. A PC CD-Rom version is currently available, so there's every possibility that a CDTV version will appear. The Patrician will be in the shops in June, so we'll carry a full review soon.



The Renaissaance period offers the game's artists plenty of scope for rich, detailed backdrops to the game.

IMPRESSIONS

JAMES POND III
MILLENNIUM



Will our fishy hero save the day? Only you can tell.

Pond is back! The team that brought us the highly successful previous incarnations of Pond are at it again. As you're probably well aware, the *James Pond* games are basically an action-orientated jump, run, shoot and squash platform series, featuring an unlikely and decidedly fishy secret agent.

After the delights of *James Pond* came the second and best in the series, *Robocod*. Then there was *Aquatics*, which if my maths hasn't let me down should have been *Pond III*. Still, as it was universally panned, maybe Millennium have decided to forget about it.

Fortunately, Millennium have decided to put Pond back on track again with *Operation Starfi5h*. The mission sees our hero pitted against his arch enemy, Dr. Maybe. The evil doc has hijacked a space shuttle carrying a top-secret defence satellite and hot-footed it to the moon. A team of FI5H agents are sent after him and, shortly before being captured, discover a hidden base on the dark side of the moon. It may be a small step for man but it's a bloody long way for an orange fish! Still, armed with a new Robosuit and a new set of gadgets, Pond leaves the safety of the sea to set foot on the moon. If anyone can save man and marine kind from Maybe's fiendish plan, it's James Pond.

There are a number of new features set to appear in the game. The most impressive thing so far is our hero's speed. It's promised that *Pond* will move at least as fast as Sonic the Hedgehog and, if he picks up the right gadget, faster even than the blue hedgehog in sonic speed! That's a very big claim, but if the preview we saw is anything to go by it could soon be reality. Another innovative feature is the introduction of a sidekick for Pond, Finneius Frog, opening the door to a two-player mode. The game also boasts over 100 different sections, a bigger Pond (40x32 pixels), and even parallax scrolling.

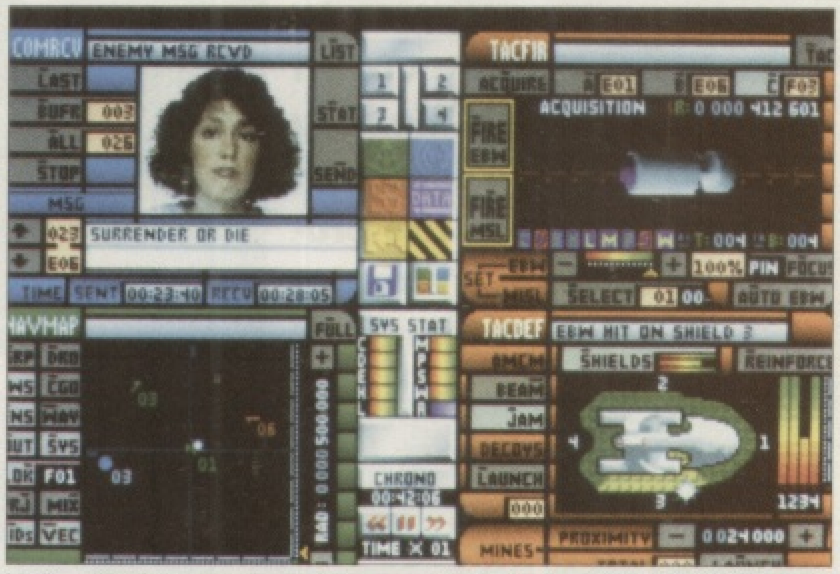
The only down-side is that *Pond III* will be released in June only on the A1200, with a 500/600 version due later in the year. Could this be the first in a new breed of Amiga 1200 games? We'll bring you a full review soon.



Amongst the gadgets to collect will be these rocket boots.



Pond's new sidekick leaps for his life to escape the evil doc.



Interface with other commanders and the enemy. A touch of realism will be added by the use fully digitised pics of the other characters.

RULES OF ENGAGEMENT 2
IMPRESSIONS

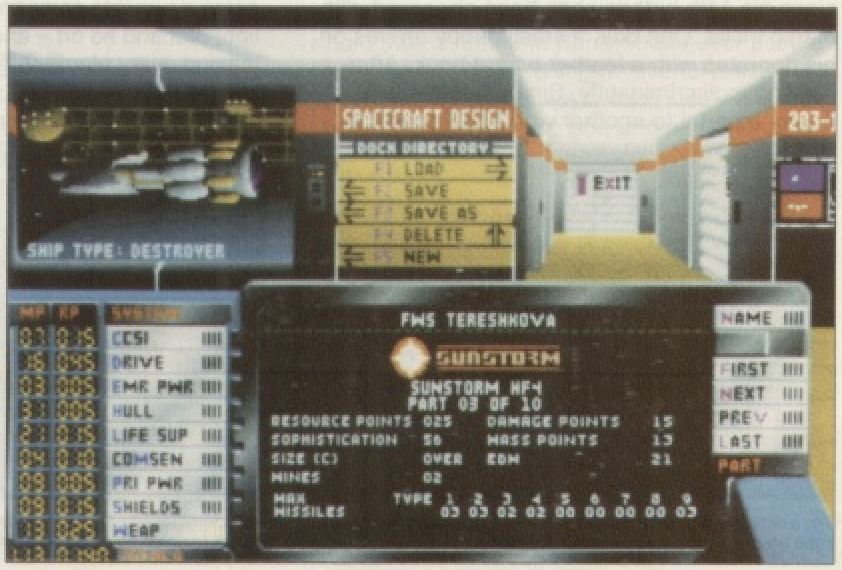
Omnitrend and Impressions are joining forces once more to bring you *Rules Of Engagement 2*, which promises a new slant on an old theme.

You will play the role of Fleet Commander of a group of spaceships through a series of campaigns against all the usual nasties and hurdles. The game is being designed in a completely different vein to most others, however, as the major part of your strategic actions will be conducted on a far more personal basis, with the Commanders of other fleets. A lot of time has been spent on the artificial intelligence for these, and consequently each character has 18 different personality traits, giving a huge variety to the game population.

All other characters have full-colour digitised photographs to accompany their character descriptions, so with any luck it should be just like dealing with deadly enemies!

To add to the human interface just that little bit more, the ship's computer will have an extensive vocabulary of sampled words and phrases, and will vocalise all ship reports. Look out for a full review soon.

Part of the strategy element will be deciding how to allocate your precious resources in the construction of the fleet. Spend wisely now and you will reap the rewards later.



Down in the dwarves' caves, there's stack of gems, along with the odd barrel of beer, but how do you get down there? After all, you're not an elf!



As Adventuresoft plan to take the adventure crown from Lucasfilm's *Monkey Island 2*, Tony Dillon can only marvel at the programming team without a programmer.

SIMON THE

Ever since *Maniac Mansion* burst onto the scene eight years ago, there has been a fierce battle to create the greatest graphic adventure ever. To be honest, Lucasfilm have held all the cards, sometimes against some very stiff opposition. Once they had *Monkey Island 2* in their hand, though, people got a glimpse of what could be achieved. The race was on.

'The problem with most British adventure games is that they are too wet. The plots are always far too thin, and there are never enough puzzles to make the games last,' complains Adventuresoft boss and long time adventurer Mike Woodroffe. 'Also, the games just aren't funny enough. Computer games should be funny, but most of the time they aren't. I notice now that people are beginning to include humour, which is good.'

And Mike's new game certainly looks funny. The plot tells of a young lad called Simon who, since his 14th birthday has been obsessed with magic tricks. One day, a small puppy arrives on his doorstep with a leather bound book. After reading indiscriminantly, Simon accidentally opens a portal to another world and goes through it. The rest? Well, you'll have to wait and see.

WIP

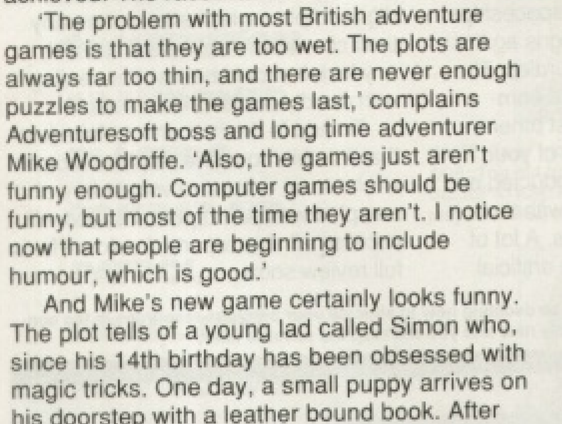
MONKEY MARKET

It's an animated graphic adventure, more in the style of *Curse Of Enchantia* than any of Adventuresoft's most recent offspring on the Horrorsoft label (*Waxworks*, *Elvira*). 'We're going for the *Monkey Island* market,' says Mike simply. 'We want to better it or at least equal it. When you see how many copies of that game have sold, it shows that there are a lot of players out there hungry for this type of game. The problem is that most just aren't up to scratch. *Legend Of Kyrandia* looked nice, but was far too easy. It was just standard adventuring, collecting gems and what have you. *Curse Of Enchantia* was confusing. There was no logic to the puzzles. The biggest problems with *Simon The Sorcerer* are that (a) we're not Lucasfilm and (b) it's not called *Monkey Island 3*! We have, however, broken our game down into components – graphics, animation, plot and so on – and are concentrating on making every element that little bit better than Lucasfilm.'

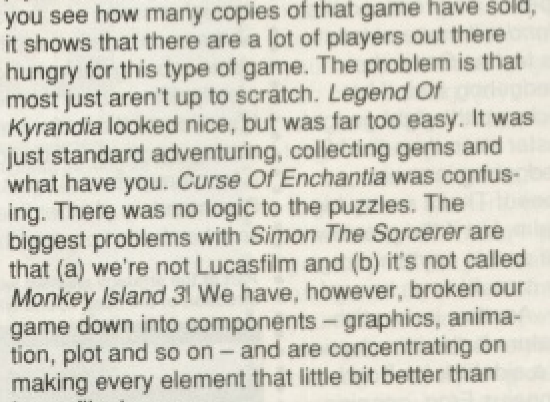
The game will be controlled with a set of verbs, as with the Lucasfilm titles, rather than the icon systems fashionable at the moment. 'We want to make it as easy to use as possible, but keep it intuitive at the same time. Icons really just perform exactly the same function as verbs, so why not just use the verbs? Ideally what we want is a game that doesn't need a manual. I never like to read manuals, I just want to load up and start playing. With *Simon*, we want people to be able to load it and get used to the interface immediately, and when they've done a little exploring and have got hooked, then they go back to the manual and find out what they are meant to do.'

NURSERY RHYMES

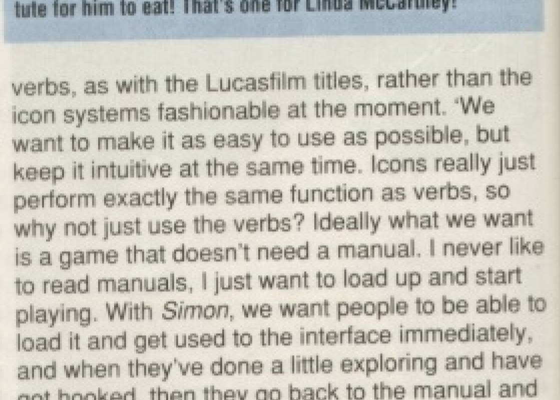
Humourous puzzles in the game will include a variety of scenes where you can interact with characters from famous nursery rhymes. At one point, you come across a bridge where the story of the Three Billy Goats Gruff is about to be played out. Along comes the first goat, and out from under the bridge pops the troll. All is going well until the troll finally admits that he's sick of the story, is fed up with being kicked into the river day in, day out and is starving because he never gets any goats to eat. Story books and union rule books are drawn, and the two characters argue away like mad. What you need to do is find a goat substitute for him to eat! That's one for Linda McCartney!



The animation in *Simon* has to be seen to be believed. Over 1000 frames, just for one scene!



Look familiar? Yes, it's the house from Hansel and Gretal. Who needs to solve an adventure, when you could just eat..



No village would be complete without an inn, and here's your local. Quaint looking, isn't it?





Above: The superb graphics are being drawn on a PC with VGA graphics at the moment, and will then be scaled down to 32 colours for the Amiga. Makes a change from Adventuresoft's previous set up, when they drew all graphics on STs!

At one point of the game, you go through the 'Alice In Wonderland' change, whereby you get very, very small. That rusty tap is causing one hell of a river!

SORCERER

CLEVER MOUSE

Mouse control is the order of the day, but this is being designed as the most intelligent mouse control to date. As you pass the mouse pointer over the verbs, possible words become semi-lit. Clicking with the left button selects, and then sentences are constructed in the normal way. For example, if there is no-one else in the room, the 'Give' verb won't light up. If there is someone, you can click on the 'Give' icon, and then on the object in your inventory. A text window will ask you 'Give object to whom?', and you then click on the person you wish to give it to. Simple!

But does a game like this need verbs at all? Take *Legend Of Kyrandia*, for example. There's a game with no menu interface. 'With *Kyrandia*, you can't tell why something hasn't happened. There are no messages to explain what mistakes you might have made, which makes the game very confusing.'



The 12 commands are all you need to find your way around the game. 'We want to make it as intuitive as possible', claims Mike.

SHORT TROUSERS

Another criticism that Mike levels at his rivals is the shortness and simplicity of their games in comparison to *Monkey Island*. 'With *Simon*, we're trying to create a game that, once you know everything about it and can run through it from start to finish, will take two hours to play. That's about as long as *Monkey Island 2*. If, when we've finished the game to our designs, we find it's too short, we'll just add another location and another puzzle.'

Another puzzle could involve another day's play, if the current set up is anything to go by. The puzzles themselves form vast sections of the plot, and go much further than the 'find an item and give it to the Orc' variety so often used. In *Simon*, the puzzles are stacked, stretched, interwoven and then doubled back to make them as complex as possible, while still keeping them logical. In the case of the Orc scenario, in most games that would be the end of that particular puzzle. In *Simon* it would be much more along the lines of 'Give the item to the Orc because he has the gem you need to open the door to get into the building which contains the brick required to smash the glass...,' and so on.

A lot of time is being given over to the graphics. The screenshots on these pages are PC VGA unfortunately, as there are no Amiga screenshots available at the moment, but there shouldn't be that much difference once the palette is squeezed down to 32 colours. If you study the pictures closely, you'll notice a definition not usually seen in this kind of game. In fact, they're far better than *Monkey Island 2*!

The secret is simple. Adventuresoft have five full time artists working on the game, three of whom (Maria, Jeff and Karen) had never used a computer before. By using traditional artists rather than *DPaint* jockeys, each location is sketched by hand using pen and paper, and then scanned in and coloured on a PC. This gives much more clarity to the backdrops and saves a lot of memory too, as you can control the palette. Lucasfilm hand paint the backdrops and then scan the entire image in, giving a slight blurred effect to everything as well as using far too many colours as Mike demonstrated when he loaded one scene, and then squeezed the palette down to 32 colours. There was no loss of definition, and practically no loss of tone, but a huge memory saving.

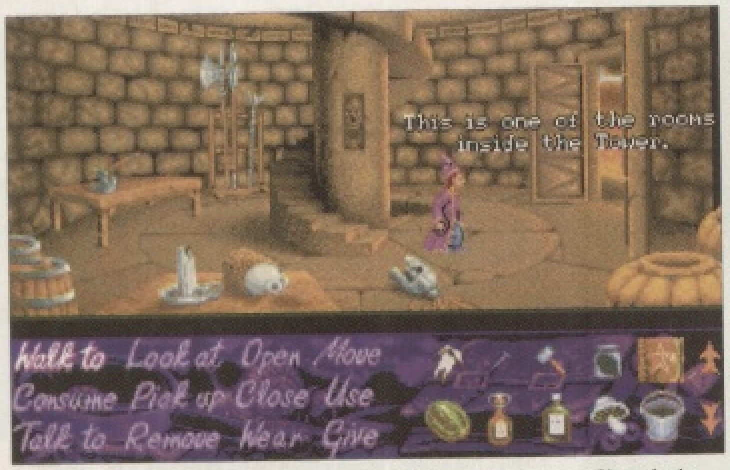
KEEP ON MOVING

The animation is probably the most impressive feature of the program so far. Mike wanted

JUST YAKKING

Simon Woodroffe, who just happens to be Mike's son, has spent a long time working on the character scripts for the game, and most of it is very, very funny. A lot of conversations in the game won't require any input from you, you can just stand back and watch people talking. My favourite has to be the four wizards hiding away in a pub pretending to be yokels playing a game of Mah Jong – only they aren't particularly sure of the rules, and what ensues is something Tony Hancock would have been proud of.

Fat:	Where did this game come from anyway?
Specs:	That short man with the strange eyes gave it to us, remember?
Fat:	I hope we didn't have to pay for it.
Thin:	A very nice man though, as I recall.
Specs:	Very clever with his...wok, wasn't it?
Thin:	That thing looked really sharp. I wouldn't dare mess with it.
Specs:	I wanted to meet his confused friend he was always on about.
Thin:	He wasn't confused. He was called Confusion or something.
Specs:	Judging by some of the things he is supposed to have said, he sounded pretty confused.
Old:	I had a friend who was confused once. Never saw him again.
Thin:	Let's have another go at this game then.



Bearing more than a little resemblance to the *Monkey Island* games, *Simon* looks like an extremely polished piece of work. The main characters's verbal interaction will take place on screen with the player being offered a choice of responses.

If you think that a system like this would be limiting – after all, you can spot a game written in The Quill, or SEUCK a mile off – then check the differences between this game and any of the Horrorsoft titles. They were written in the same system, and the only similarity between them is the fact that they are adventures. Mike is confident that any sort of game could be written in AGOS, provided you have the completed graphics and a full design. After all, if a necessary command isn't in the system, a module can be attached quite simply. Could this be the way forward for Amiga games? I certainly think so.

To show how easy the system is, Mike created a new room for me. First the name of the room was defined as a noun using the MAKE NOUN command. Next the room was defined using MAKE ROOM command. A series of flags appeared, which showed what sort of room it was and what it connected to. Text descriptions were added and a link command was used to load a graphic file. It really is as easy as that. Mike has no plans to release AGOS commercially, but we are badgering him for a coverdisk copy. Some chance!

At present, *Simon The Sorcerer* looks like it could be just the title to knock *Monkey Island 2* from its pedestal. To see if it does, though, you'll have to wait until September at least. More news as we have it.

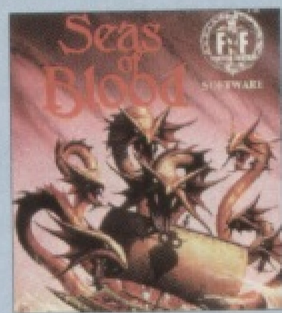
Disney-quality animation, so that's what they've gone for, and already the effect is stunning. There are 80 frames just for Simon's walk (facing various directions), as well as numerous small animations for specific actions. In one scene, a Swampling is trying to get Simon to eat some delicious soup which is in fact warm swamp mud. For this scene alone there are over a thousand frames of animation. There's perfectionism for you!

The most staggering thing about Adventuresoft is that they have no full time coders. They simply don't need any. The games are pieced together by Mike, who admits freely that he can't program. He just uses an exclusive system called AGOS, written by himself and partner Alan Bridgeman a couple of years ago when he had become completely fed-up with programmers missing deadlines. A game construction kit in essence, the immensely powerful database system allows graphics and sound files to be linked together simply and turned into a full game. After looking at the system for five minutes, I can honestly say that it seems simpler than AMOS!

Simply moving the mouse pointer over objects on screen will make the relevant action verb light up. You can then select that action with another mouse click.



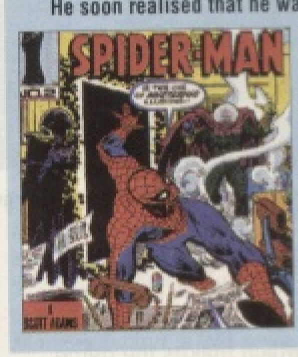
WHO THE HELL IS...MIKE WOODROFFE?



If you have spent more than five minutes in the last 10 years playing any adventure games on any machines, then the name Mike Woodroffe should ring a bell. Mike is one of the longest running game designers in the business, clocking up more awards and accolades than anyone else in his field.

It all started back in the very early 80s, when Mike wondered why there were no computer shops in Birmingham. Remember, at the time the only 'home' machines available were the Apple 1 and the Commodore Pet. He set up a software shop, and soon found out why. Nobody wanted to buy computers, and there was no software for them. Before long, he had the idea of setting up business importing software from the US, particularly from Scott Adams at Adventure International. Mike was also the first person to stock Microprose software in the UK, ordering direct from Major Bill Stealey himself, and also has his name on the first ever Centresoft (US Gold's distributing arm) order, which is framed and hangs in the Centresoft office.

He soon realised that he was paying a lot of money to freight air, so contacted Scott Adams about the possibility of duplicating the software in the UK. Scott agreed, and Adventuresoft was born. A year or so passed, and Scott Adams text-based adventures were a strong favourite. Then came the Oric, the C64 and the Spectrum, and Mike set about converting the back catalogue for these machines. His big break was just around the corner.



The Questprobe series was a revolution in adventure gaming. Large, colourful graphics and an intelligent parser made these two adventures – based on The Hulk and Spiderman, massive hits instantly. Adventuresoft had a name. More and more adventures appeared and sold in the heyday of text adventures, and Mike changed his hand to arcade games, converting Gauntlet to the ST and writing the *Captain America* platform game.

At this point, Mike was getting fed up with programmers. He had half a dozen working under him, and found their run of missed deadlines and shoddy work all too much. With Alan Bridgeman and Alan Cox, he created the AGOS games system and formed subsidiary label Horrorsoft, which went on to release *Personal Nightmare*, *Elvira 1* and *2*, and *Waxworks*.

MIKE WOODROOFE – A SOFTOGRAPHY

Scott Adams Adventures	1983
The Sorceror of Claymorgue Castle	1984
Questprobe – The Hulk	1984
Questprobe – Spiderman	1985
Gremlins	1985
Robin of Sherwood	1985
Questprobe – The Human Torch and The Thing	1985
Gauntlet (ST)	1986
Rebel Planet	1986
Kayleth	1986
Temple of Terror	1986
Captain America	1987
Masters of the Universe	1987
Heroes of the Lance	1988
Personal Nightmare	1989
Elvira I – Mistress of the Dark	1990
Elvira II – The Jaws of Cerebus	1991
Waxworks	1992



Mike created
the room
E NOUN
using
ags
room it was
tions were
to load a
Mike has
ly, but we
y. Some

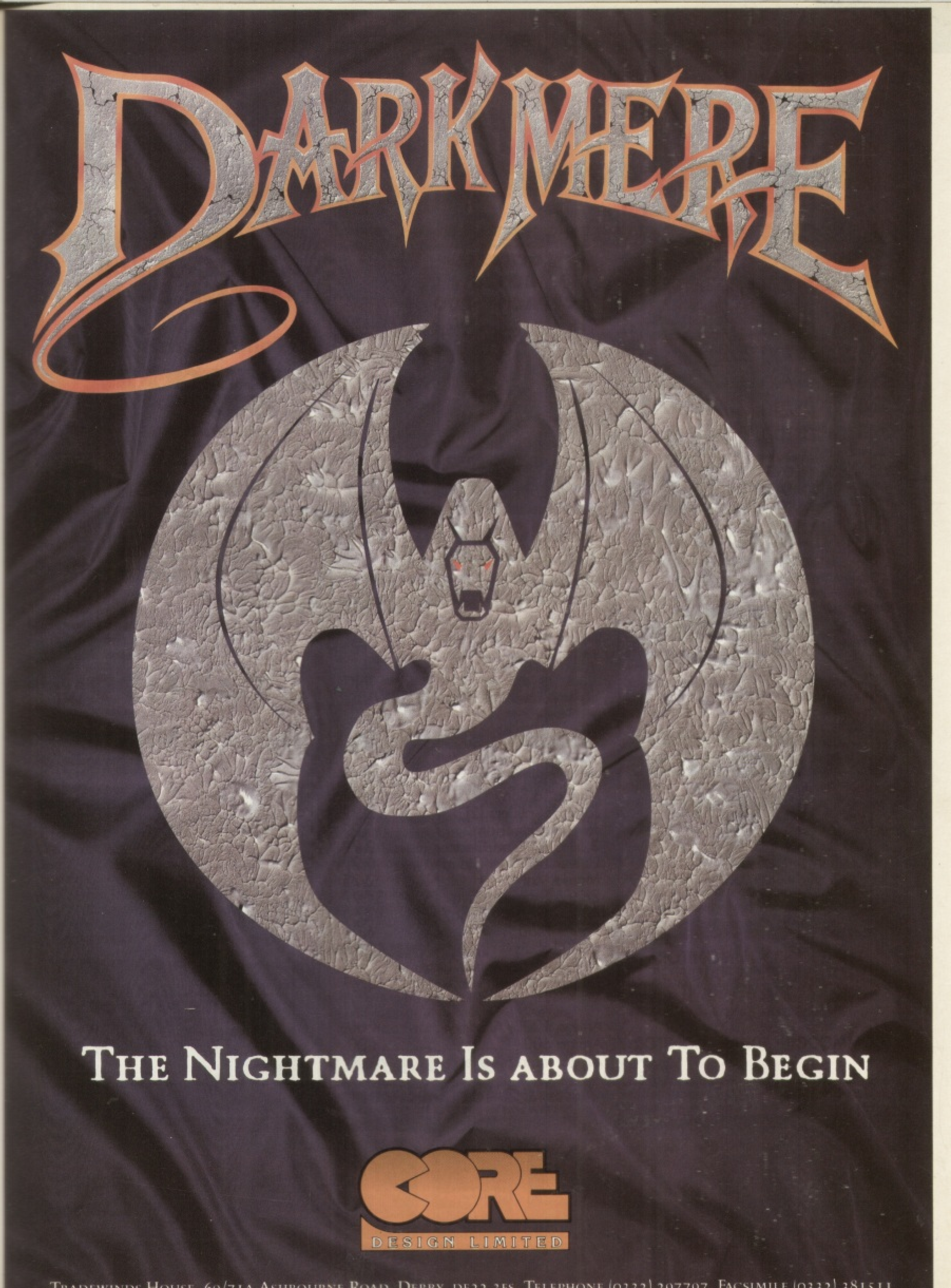
ks like it
Island 2
ugh, you'll
More news

FFE?
machines.

adventure
elligent
The Hulk
turesoft had
and sold in
ged his hand
T and writ-

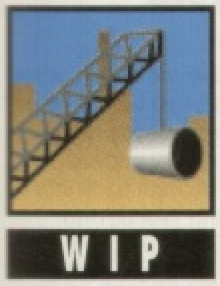
program-
and found
k all too
created the
abel
Nightmare,

RAPHY
1983
1984
1984
1985
1985
1985
1985
1986
1986
1986
1986
1987
1987
1988
1989
1990
1991
1992

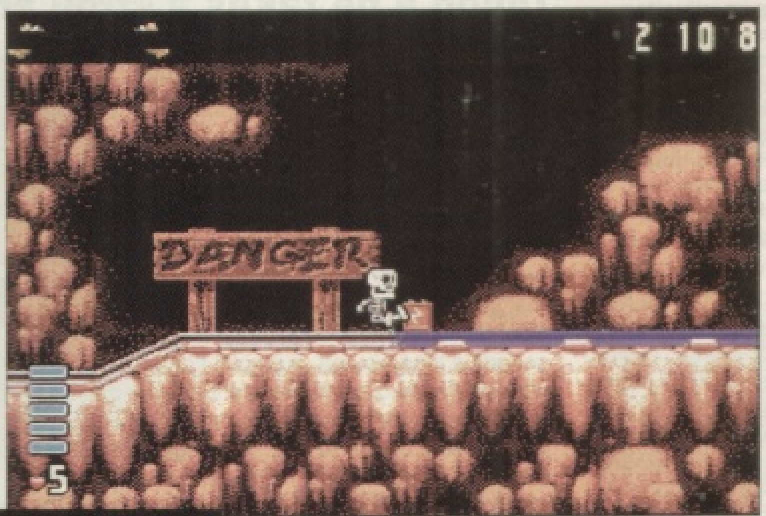


ARABIAN NIGHTS





Krisalis think they have a good idea of what would happen if you crossed Sinbad with Zool. Tony Dillon pictures Aladdin of the Nth Dimension.



Top: At points where inspiration strikes, a lightbulb appears over your head. Press space to see your idea.
Left: Touching electrified rails causes instant electrocution, so stay in the mine car!

This year it looks like Krisalis are turning their backs on their footballing roots. *Arabian Nights* is a scrolling platform romp that promises to be the fastest, the biggest and the best ever. It may not be able to hold true to those promises, but it does look like it could be one of the most varied platform games in a while.



Extra lives, energy and other bonuses can be found in these chests strewn about the levels.

Pieced together by the two-man team of Simeon Pashley (*Graham Taylor*, *Manchester United* ST, Megadrive *Robocod*) and Darren Hebden over the last nine months, the game follows on where the manual leaves off. You have been captured and held prisoner by the evil Caliph (boo, hiss) who thinks you have kidnapped his daughter Ayrina (phwoar). You haven't, of course, being the hero (hooray!), but you still have to prove your innocence. So, you have to first escape and second, find the Caliph's daughter.

WOMANHUNT

The journey will take you over 10 tortuous levels, but then again, what doesn't? Not only will you have to run around inside and outside the city, you'll need to fly on a magic carpet, dig around in a diamond mine, race in a mine cart, cross the seas on a ship, sniff about in the forest and if you have enough time at the end of all that, you might just want to slip into a volcano or two!

The promising thing about *Arabian Nights* is the amount of variation between levels. On the first level, you are racing about a straightforward eight way scrolling platform game, with all the usual moving walkways, disappearing floors and maze-like rooms. On the next level, however, you are pacing the forest warping between locations by using wells, just like that age-old classic *Wizball*.

PUZZLING AWAY

The core of the game will be puzzle solving rather than slicing and dicing. On each level, goals have to be achieved before you can move through customs to the next area. The goal might be to collect a number of coins or just find the exit, but you can be sure that it won't be easy – whatever it is.

As you wander around, you'll find objects hidden in treasure chests or they will be given to you by people you talk to. It's down to you to figure out how they are used.

The clues come in the way of a small lightbulb that appears above your head, à la Gremlin's *Harlequin*. At these points, tapping the space bar brings up a text window that will usually hint towards something you have to do. At the start of the game you come across a prisoner hanging from a wall. As you pass nearby the lightbulb appears and tells you that the winding handle from the mechanism that frees the prisoner is missing. What do you suppose you have to do then? Other clues, fortunately, are less obvious.

One other sequence worth noting is the Mine Cart race. The mine layout is a maze of crossing tracks and broken rails, and you have to find your way to the end by following tiny little signs while staying ahead of the other, strangely unoccupied cart. If you liked the mine scenes in Indiana Jones and the Temple Of Doom, you'll love this.

Although *Arabian Nights* might not look like the most original platform game ever devised, it sure does look like it's going to be fun. We'll have a full review very soon.



This sad bear is just one of the main characters you will encounter in the game.

BEHIND THE SCENES

● *Title:* Arabian Nights ● *Publisher:* Krisalis ● *Graphics:* Darren Hebden ● *Programming:* Simeon Pashley ● *Release Date:* April ● *Price:* TBA

EXPRESSIVE ART

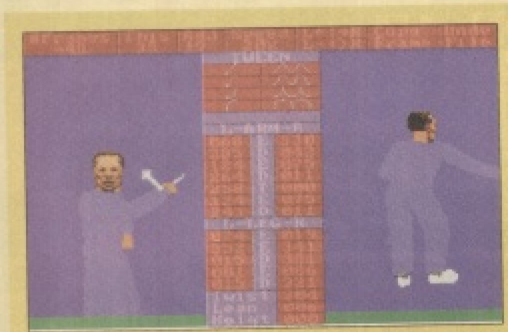
The main character, whom we'll call Sid, loves to show off. Sid, in fact, has a variety of expressions and poses, and enjoys displaying them whenever he can. Leave him alone for too long, and he'll start peering out at you. Stand him too close to the edge of a platform and he'll swing his arms to balance himself. Stop him in mid-run, and he'll skid. Yes, I know it's all been done before, but it still makes me laugh.



Arab Wobble | Arab Swing | Arab Swim | Arab Skid | Arab Climb | Arab Bored

CYBER

In a violent future city the only way to escape is to enter a virtual world inside your computer. Join Tony Dillon a he takes a stroll amongst the hardware



THE FUTURE OF CODING?

Elsewhere in this issue you might have read how Adventuresoft no longer program games. Instead they use their own custom-written game creator, leaving the world of game production open to designers rather than coders. ODE have also written their own system, which allows them to write plots and sub-plots. The system is flexible enough to allow them to add new commands when needed. I asked Rick if he saw this as the way forward in game development, particularly with consoles threatening the flow of new programmers. 'Yes, absolutely. There will always be a need for low-level programmers, but with a system like this, only a very basic knowledge of programming is needed.'

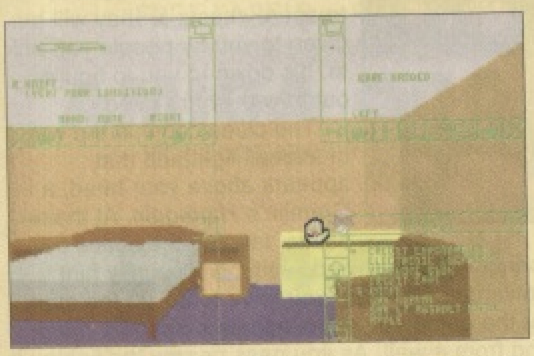
Imagine a game where you had the freedom to walk through a complete city, a game where you could meet people you recognise and strike up friendships, a game that didn't restrict you to a single plot or a single path. Most importantly, imagine a game that didn't behave like one, a program so realistic that you forgot you were playing a game. Sounds incredible, doesn't it? It also sounds a long way off, but not if you take a look at what ODE are currently beavering away on.

The team that mixed polygons with bitmaps for the first time on the Amiga, creating games like *Sleeping Gods Lie* and *Team Yankee*, are getting ready to return with what could be the most incredible Amiga game ever.

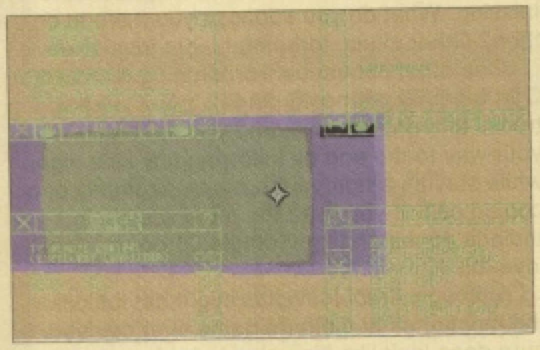
A NEW GENERATION

Most people are familiar with the term cyberspace and its origins in the various William Gibson novels, if not from games like EA's *Neuromancer* then from the features CU has done on Gibson and his world predictions in the past. Cyberspace will be the sixth generation of computing, vast computer networks that you actually enter – usually for some illegal purpose. No more sitting at a screen waiting for a modem download. No more tapping your fingers in irritation as you wonder why the hard drive is taking so long to find a file: the world of cyberspace lets you do the running.

Cyberspace, the game, is based partly on the Gibson novels, but mostly on the ICE role-playing game of the same name. A complicated affair, similar in style to Games Workshop's Cyberpunk, the game is set not in the murky caves of some mystic past but in a grim, crime-filled future. The message is simple: things don't get any better from this point on. But how did it all come about?



The simple HUD, coupled with the full screen 3D combine to make the game as little like a computer game as possible.



Every building has its own Cyberspace Network, entereed by jacking into one of these ports,

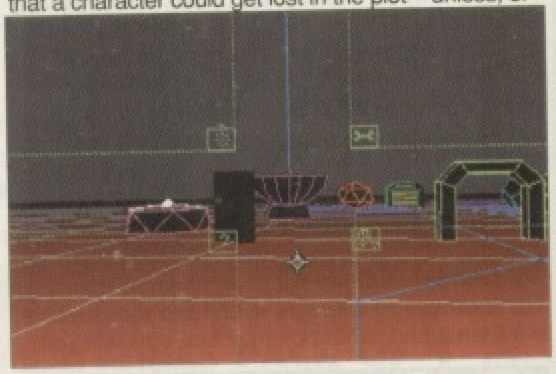
W I P

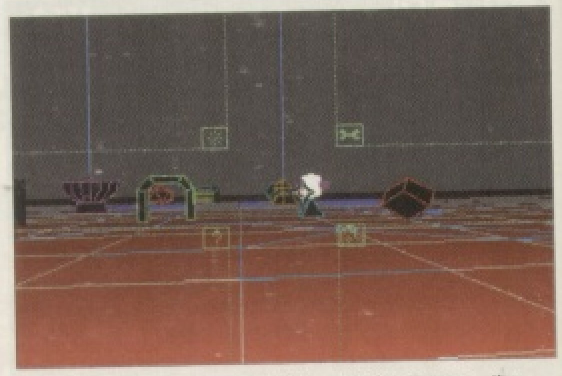
'After *Team Yankee*, we did a couple of arcade conversions, just for a change,' begins Rick. 'However, nobody here really enjoyed doing those, and we couldn't wait to get our teeth back into something meaty. John Wood, who designed *Sleeping Gods Lie*, came up with most of the design for the game, and we've been working on it for the past 18 months.'

'Then the cyberspace RPG licence came up and we went for it. Most of us here play RPGs, and one thing that really gets to me is the fact that there are no real role-playing games on the market. Obviously with games like *Ultima Underworld* the genre is progressing, but most of the time you're just playing someone else's adventure. There's none of the feel generated by a human Game's Master. What we're trying to do is give the computer GM some intelligence, so you don't end up in one of those situations where you're walking around aimlessly, not quite sure what to do and there's nothing happening. In *Cyberspace*, the computer will see what you're doing, and move the plot on a little. The encounters it throws in might not have anything to do with the overall plot, but at least you're doing something!'

SIZING UP

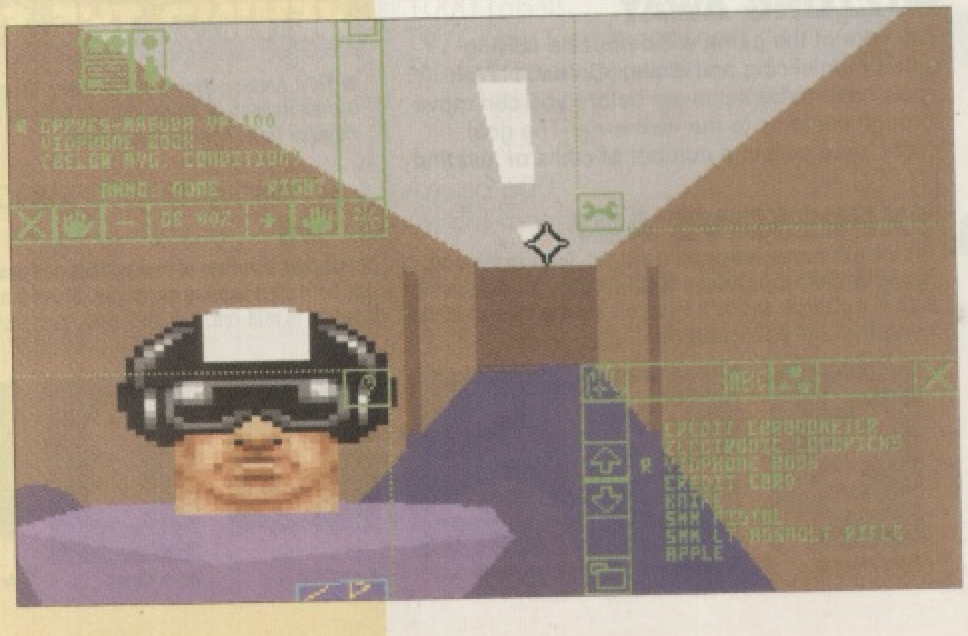
Surely if an adventure is written well, there's no way that a character could get lost in the plot – unless, of





Devpac was never like this! Working with Cyberspace – the futuristic computer interface – is more like a 3D space battle than any set of CLI instructions you may have used.

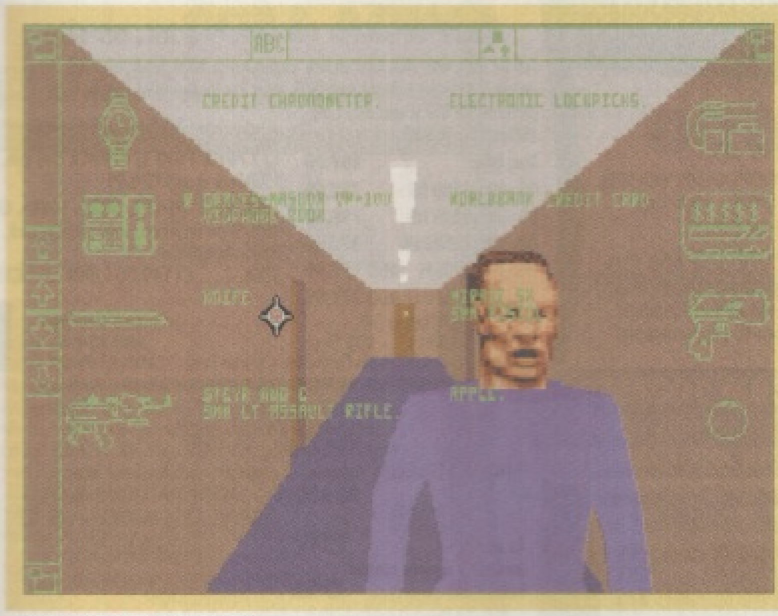
Take a good look at this guy's face – there's every chance you'll see him again!



R SPACE

CONVERSATION

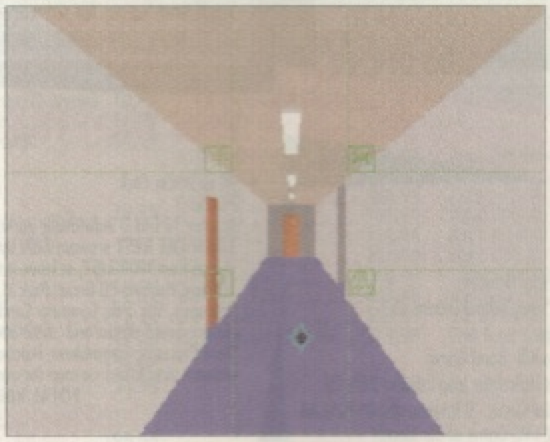
The conversation element is possibly one of the freshest ideas in the game. In a true RPG, you would never be given a choice of three answers to any question, so that system has been dropped in favour of this new one. If you are asked a question, generally you will be given a choice of answering yes/no, or tell the truth/lie. Next to these will be two slider bars, which affect both the strength of your reply (a weak yes, a resounding lie) and the tone in which you answer (complimentary to insulting). This is the most expressive system of conversation yet seen in a computer game, and if it pays off, it'll be worth playing for that alone.



TOMORROW PEOPLE

A million and a half people is a lot to envisage, especially when you consider that each one has a job, a home and a face. Yes, a face. ODE have come up with their own 3D photofit system that allows every character in the game to look different. The bodies and clothes are created from polygons, and then the bitmapped face is pasted on. The possibilities this allows are almost endless. Rick hopes that when the game is running, you'll be able to go to the same bar a couple of times and recognise the regulars, even make a circle of friends you could spot anywhere, not just regular meeting places.

course, there's far more to get lost in than ever before? Statistic freaks, brace yourself. *Cyberspace* is based in the fictional United States' city of New Boston. The city measures 16 miles by eight miles, with over 100,000 buildings. Each of these has a number of floors, broken up into several rooms, of which there are more than a million. In these rooms is the city's population, close to a million-and-a-half residents. Each has his own name, character, job, address and physical appearance. Isn't that all a bit too much? 'Well, no. A lot of the buildings are there for completion – after all, you can't have a city without factories. You can go into any of the buildings you want, but that doesn't mean that anything is going to happen. If you walked into a factory now, would you be attacked straight away? Or be welcomed with open arms?'



Most of the buidlings are made up of long corridors and unusual rooms. But, if you're expecting another *Mercenary*, forget it.

Yes, but what is the plot? This is something Rick wouldn't give away. What follows is his description of how the plot will fit together. If it seems a little cryptic, take a deep breath and read it again.

'There are six different character classes in the game, and each starts at a different point. Each character has been called into the city from outside to do a particular thing, and being different characters they do them in different ways. As each character starts at a different point, there are essentially six different stories to play, but after about 20 per cent of the game has been played, the plots merge into one. There are lots of sub-plots in the game too, which you can play if you want. These could be anything from doing a small job for someone to meeting a new circle of friends or just going to the pub for a game of darts.'

So where does cyberspace fit into all of this? 'Every building has its own computer network, and all of these are connected to a main network. Within this frame, if you're good enough, you can break into systems and get information on the buildings and the people who live there. Most of the actions that are done in cyberspace can be done in other ways, so people don't have to become Net Junkies, but you have to do a little at least.'

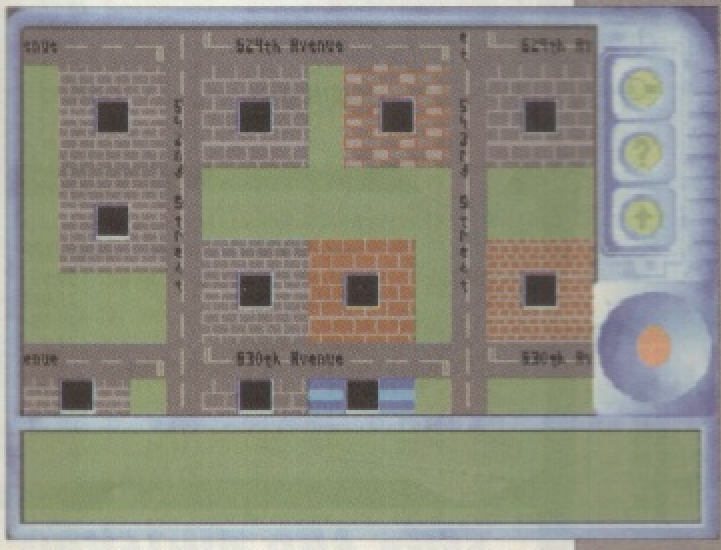
Unlike EA's *Neuromancer*, where there was a lot of adventure solving to do before you could enter the cyberspace system, cyberspace will allow you to log on immediately, and as the cyberspace map is as large as the New Boston one, players will need to do a lot of feeling around.

THE FUTURE

Who's to say if *Cyberspace* is the game of the future – all we can say is that from where we're sitting it's a very exciting proposition. ODE might just have come up with the game that the Amiga was invented for. More news as and when we have it.

BEHIND THE SCENES

● ***Title:*** **Cyberspace** ● ***Publisher:*** **Empire** ● ***Graphics:*** **ODE** ● ***Programming:*** **ODE** ● ***Release Date:*** **September** ● ***Price:*** **TBA**



You move around the city using this map mode. Due to the size of the map, it makes to sense to walk between buildings.



This is an early version of the character body used in the game. When finished, there'll be stacks more polygons making up the legs.



After the belly-bumping antics of Chuck Rock, the prehistoric boozer returns for some more platform fun. Only this time he's had a son. Tony Dillon goes clubbing.

I have to raise my hand at this point and admit to one and all that I was never really a big fan of *Chuck Rock*. Most people I speak to seem to say the same thing, but that didn't stop it outselling everything in sight when it was first released. Now, after two years, Core have returned with Chuck, Ophelia and a new addition, Chuck Junior.

After defeating Gary Gritter at the end of his first adventure, Chuck has settled back to a life of luxury and success. With his developed mechanical skills, he shot right past the wheel and fire and any other major inventions and created the 'Rock-Et', the world's first car. Chuck was an instant hit, and quickly became one of the richest men in the world as owner of Fjord Motors. But that success was instantly topped by the birth of Chuck Junior.

NEVER EASY

But things aren't all rosy (are they ever?), as Chuck made a lot of jealous enemies on his meteoric rise. One sunny afternoon, two hoods enter Fjord Motors with a proposal from Brick Jagger, of rival company Datstone, to buy Chuck out. Naturally he refuses, wishing to keep his son's future safe. On his refusal, he is bundled out of the office at gunpoint and kidnapped. Ophelia is too overcome to do anything about this, so the only person who can rescue Chuck is... Junior!

The game itself is a scrolling platform escapade like the original, in which Junior must toddle from left to right bashing baddies, leaping over spikes and generally causing the same kind of havoc that 18 month old babies usually do. It's all set over six huge levels, with four sub-games played out in between, so there should be enough there to keep you playing for a while.

From loading you are treated to an excellent animated intro, which leads onto the main menu screen. Here you can choose the difficulty level the game plays on, which affects the strength of your attack, the strength of the enemy and the complexity of the puzzles. On the easiest level, the traps and problems are marked with arrows, making puzzle solving far simpler.

Select your difficulty level, and it's straight off to the prehistoric suburbs for some serious clubbing. Naturally the first thing that hits you are the graphics, and initially, to be honest, they look a little messy. Obviously, there are multiple levels of parallax, and it goes without saying that there are dozens of colours on screen at once. That doesn't really help the fact that straight off all you can see is a large green expanse, but it doesn't take long to get used to it, so that's alright.



One of the biggest sprites in the game, this mammoth bird strides across the screen just when you aren't expecting it.

CHUCK ROCK 2
SON OF CHUCK



The gargantuan Dan, and he's taking a bit of a pasting, as you can see from the cuts and the black eye.

ADORABLE

Once you've adjusted to having a layer of parallax scrolling in front of the main character, you can begin to appreciate the superb character animation. Just the main sprite alone is bursting with personality. Check the scowl as he crouches in the bushes. See him scream a battle cry as he leaps heroically into the fray. Watch his lip wobble as he runs out of energy, before throwing himself on the floor in a screaming tantrum (just like our wonderful Editor). He's just sooooo adorable! (Unlike the Ed.)

As I've said, you start the game in the suburbs, which are little more

IN BETWEENING

In between each of the levels is a sub-game, just to add that little extra variety to the game. After level one, Junior comes across a giant apple tree, and suddenly feels compelled to knock the apples off the branches. The more he knocks, the higher the points! After level three, Junior races against an upturned Turtle in the Chuck Rock River Race. A waggler from start to finish, this should tire you out enough to slow your progress on level four.

Survive level four, and you get a carving lesson, whereby you have a carve a statue of Daddy from a lump of stone by smashing it with your club. Finally there's the Dinosaur and Cart race from the cliff face to the car plant, where Junior is attacked from all angles as he races along on the back of a cart drawn by a donkey-like dinosaur. How's that for variety?



than thick forest areas with people running around. Right from the start the humorous side to the game is apparent. Long haired cave-people attack you, some disguised as dinosaurs who leap to one side with their hands hiding their modesty when you hit them, whereas others have killer wigs which come after you once you've attacked the owners. It isn't particularly belly-laugh inspiring, but there's enough there to raise a chuckle.

From the Suburbs you move onto the back of a huge brontosaurus, then to the jungle, over a waterfall, along a volcano, down a cliff face and finally into the offices of Datstone motors, where you have to rescue your daddy. Each of these levels is large, somewhere between eight and 32 screens each, scrolling in all directions. At one end you have a definite start position, and at the other is an exit flag. All you need to do is get from one side to the other without dying, which is a lot harder than it sounds.

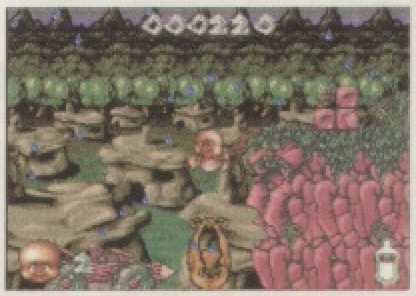


Some dinosaurs will let you stand on their backs, and make excellent vehicles.

If you like, you can walk along the ground, but the bonuses and other toys are to be found in less accessible places, so it's worth the effort to take more obscure routes through the levels. Secondly, there are quite a few traps waiting for you. Spikes are the most common, waiting to spear you. Most of them are just lying around, easy to spot and just as easy to get over. Others, though, involve a little more thought. Some stretch along for half a screen, giving you no chance of leaping over them. This is where the puzzle solving element of the game appears.

A LITTLE HELP

If the gap is too large to jump, look around for something to aid you. In the original *Chuck Rock*, Chuck could throw boulders around. Junior isn't strong enough to do the same, but he can whack them along with his oversized club. These can be knocked onto the spikes to make stepping stones, or placed near high platforms to act as stairs. Who would have thought that stones could be so versatile?



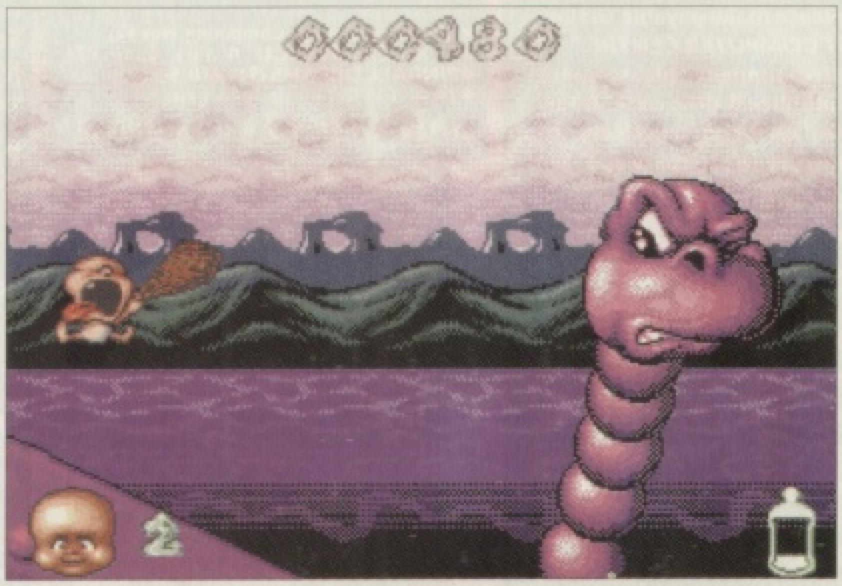
This strong man throws you up to the platform above. What a hero!

Not that stones are the only way to solve problems, of course. There are a variety of other helping hands along the way, such as small dinosaurs who will let you ride them across levels, or a plethora of different springboards, ranging from squids to strongmen, who will throw you into the air allowing you to reach higher platforms.

Chuck Rock 2 features some of the largest enemy sprites ever seen on the Amiga. Half way through the first level, a pair of legs stomps across the screen, and god help anyone who gets in the way. If you've already played our coverdisk demo, you'll know how huge Dan The Dinosaur is, and that's nothing compared to the Brontosaurus that takes up the entire second level.

Playing *Chuck Rock 2* is a lot of fun, even after the humorous elements have worn off. Using the club is an immensely satisfying form of attack – there's nothing to match the crunching of bone as you bring a well timed hunk of wood down across somebody's head. Gosh, that sounds violent!

All things considered, though, *Chuck Rock 2* is really nothing new or special. Don't get me wrong, it's a really good game. Fast, playable and fairly addictive, but there just doesn't seem to be enough to it to really keep you entertained for any great length of time.



The end of the second level, and Bronto here doesn't look to happy about being walked across.

A1200 FUN!

At the moment *Chuck Rock 2* is fully compatible with the A1200, but get this! Later on in the year Core will be releasing an A1200 specific version! This new improved *Son of Chuck* will feature more colours! More enemies! More fun in general! Watch this space.



Junior in mid battle cry. Watch out for that giant turkey!



Swinging across on vines is an excellent way to get around the jungle.

CORE DESIGN £29.99

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓ A1500 ✓ A2000 ✓ A3000 ✓ A4000 ✓

CORE DESIGN, TRADEWINDS HOUSE, 69/71 ASHBOURNE ROAD, DERBY, DE22 3FS. TEL: 0332 297797

RELEASE DATE:	MARCH
GENRE:	PLATFORM
TEAM:	IN HOUSE
CONTROLS:	JOYSTICK, JOYPAD
NUMBER OF DISKS:	2
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	NO
MEMORY:	1Mb

GRAPHICS	82%
SOUND	71%
LASTABILITY	64%
PLAYABILITY	79%

'Playable but standard platform romp.'

OVERALL 79%

19444

ORS
UK spec.
nplete with
ead

onitor make sure
ht be buying what
wer price but it is
e monitors do not
nd are not covered

833 MK2
onitor
e resolution, green
intenance.
o Esprit!!
UK Spec.
8833..£64.99

084ST
onitor
new moitor from
g value
99
Colour
erscan
uality Super VGA
, .28 dot pitch.and

.99
54.99
deo card
59.99
ONITOR
set with
ST TEXT
19.99
t
multisync
99
IES with monitors
£11.99
£5.99

DEMS
Modem
baud !!!)
messages. This new
0 baud capability.
, V22, V21, MNP2-
hands, 9600/14400
ftware and modem
99!!!
with
wer supply,
with the
ly £10.00
modem
Plus
BPS)
en faster than the
dial & auto receive.
, MNP 2-5 & auto
eeds. Includes free
9.99
only £39.99
odem
00
modem with auto
omp, V22 BIS. Inc
99

PRIMA A500 PLUS & A600 RAM

BEWARE of cheaper RAM expansions. Some dudious companies use second hand used chips. We only use new chips of the finest quality and reliability!!

3 YEAR WARRANTY!!

	A500P	A600
Unpopulated.................only	£16.99..	£23.99
Populated to 512K.....only	£29.99..	£36.99
Populated to 1 Mb...only	£37.99.	£46.99

2 Mb A600 OR A1200 RAM card..£119.99
4 Mb A600 OR A1200 RAM card..£179.99

AMIGA A500 512K RAM by PRIMA
for the original 1.2/1.3 AMIGA..only £27.99

PRIMA ROM SHARERS

Because some older software will not run on Kickstart 2 First Computers launched the PRIMA (as supplied to Phoenix) ROM sharer. This high quality ROM sharer features a flexible ribbon connection so that it can be positioned anywhere within your A500 Plus or A600. Full 2 year replacement warranty

now only £19.99 or £27.99
for keyboard switchable version

SUPRA RAM

Simply the best! Fits onto the side expansion port Auto configures with no software patching.

When 256*4 ZIPS are used, the Supra RAM can only be populated up to 2 Mb without replacing with 1 Mb by 4 ZIPS.

8Mb pop to 1Mb..........£119.99
8Mb pop to 2 Mb (256*4zips)....£144.99
8Mb pop to 2 Mb (1Mb*4 zips)....£159.99
8Mb pop to 4 Mb....£214.99
8Mb pop to 8 Mb.......£319.99
8Mb pop to 2 Mb for 2000/1500 range......£149.99

NEW!! ACCELERATORS

SOLID STATE

The A5000 comes complete with Maths Co-pro

A5000 + 1mB 16.67 Mhz......£154.99
A5000 + 2mB 16.67 Mhz......£194.99
A5000 + 3mB 16.67 Mhz......£229.99
A5000 + 4mB 16.67 Mhz......£264.99
A5000 + 1mB 25 Mhz..........£279.99
A5000 + 2mB 25 Mhz..........£324.99
A5000 + 3mB 25 Mhz..........£419.99
A5000 + 4mB 25 Mhz..........£599.99

MICROBOTICS

VXL30 25Mhz...................£229.99
VXL30 40 Mhz...................£349.99
68881 Co pro for above......£79.99
1 68882 Co pro for above...£119.99
32 bit 2 Mb ram for above...£189.99
32 bit 8 Mb RAM for above.£399.99

GVP GVP PRODUCTS

AMIGA A500 HARD DRIVES

GVP Series II HD8+ 42Mb...........only £299.99
GVP Series II HD8+ 80Mb........only £374.99
GVP Series II HD8+ 120Mb.........only £469.99

A500 GVP Combo's

A530 Combo 40MHz/42Mb HD..only £669.99
A530 Combo 40MHz/80Mb HD..only £759.99
A530 Combo 40MHz/120Mb HD..only £849.99
A530 Combo 40MHz/213Mb HD..only £939.99
68882 Co-Processor Kit for A530..only £214.99
32 bit 60ns 1Mb SIMM for Accelerator..only £64.99
32 bit 60ns 4Mb SIMM for Accelerator..only £179.99

1500/2000 Hard Drives

Impact Series II HC8+ with 42Mb HD..only £289.99
Impact Series II HC8+ with 80Mb HD..only £339.99
Impact Series II HC8+ with 120Mb HD..only £409.99

1500/2000 G-FORCE ACCELERATORS

G-Force 030-25MHz with 1Mb 32 bit RAM.only £459.99
G-Force 030-40MHz with 4Mb 32 bit RAM.only £729.99
G-Force 040-28MHz with 2Mb 32 bit RAM for A3000
only £1379.99

All GVP products come with a full 2 year warranty

POWER SCANNER V3

With the latest version 3 sofware for bright & sharp grey scale performance. Flexible scanned image display manipulation options, plus Clean up, embolden, resize & flip.

NEW!! only £114.99 on demo
Colour version only £229.99

EPSON GS6500 COLOUR FLATBED
only £799.99 phone for details & demo

MICE & TRACKERBALLS

NAKSHA MOUSE only £24.99
with Operation Stealth, mouse mat, holder and 2 year warranty, 290 DPI.

Golden Image Mega Mouse
Fully micro-switched.
only £12.99

ALPHADATA OPTICAL PEN MOUSE
only £37.99

GOLDEN IMAGE Brush mouse
New concept in mice. Held in a similar way to a pen
only £22.99

Golden Image optical mouse..£29.99
Zydec Trackerball.............£29.99
Golden Image Crystal Trackball...£38.99

DISK DRIVES

PRIMA 3.5" only £49.99
1 meg high quality external drive at a great low price.

Roclite 3.5" only £66.99
super slim Roclite. Best review for disk drives in Amiga Format. Now with built in virus checker and anti click device!!

Cumana 3.5" only £57.99
1 meg external drive. The best name in disc drives now at a great price.

OPALVISION

24 bit graphics card & video system for the 1500 2000/3000/4000. Includes software bundle
only £635.99

GENLOCKS

GVP Genlock only £349.99
features professional SVHS output

Rocgen Plus only £134.99
Includes dual control for overlay and keyhole effects, extra RGB pass thru

ROCGEN ROCKEY

For creating special effects in video productionwith genlocks
only £269.99

EMULATORS

KCS Power board.........£147.99
Regarded as one of the best emulators on the market.
1500/2000 adaptor..£59.99
MS-DOS 4 or 5..£POA
KCS Power board for A600......£167.99
Vortex Golden Gate 386..£389.99
This is a PC 386-25SX Bridgeboard running at 25 MHz
Vortex Golden Gate 486..£699.99
This is a PC 486-25SX Bridgeboard running at 25 MHz
Vortex ATOnce+ 286........£214.99
286 emulator now with 16Mhz clock speed.

ROCHARD DRIVES

ROCTEC A500 CONTROLLER CARD
Very similar in style to the GVP HD8+ but without a hard drive so you can fit your own. Expands to 8Mb of RAM using SIMMS £164.99

ROCTEC 40Mb..............£275.99
ROCTEC 80Mb..............£339.99
ROCTEC 120Mb.............£399.99

ROMBO VIDI 12 £77.99!!

No filters or RGB splitter required. Colour images can be captured in less than a second, mono images are grabbed in real time. Compatible with any video source. Inc. multitasking software, cut & paste with masking, multiframe store with animated playback, composite or s-video input. 4096 HAM support.

Sound & Vision £99.99!!
Vidi 12 with built in Megamix Master!!

TAKE 2 £39.99!!
Features include load and save from D. Paint animations and IFF files. Supports HAM graphics.

Megamix Master £29.99!!
8 bit, high spec. sampler. Special effects include echo that can be added in real time, fully multitasking & easy to use.

NEW!! MICROBOTICS

The new MBX1200 CO-PROCESSOR & RAM BOARD for the AMIGA 1200

Realise the full potential of your A1200 with this trapdoor expansion

68881 14MHZ...........£133.00
68882 25MHZ...........£199.00
68882 50MHZ...........£399.00
1mb 32 bit fast RAM £62.99
2mb 32 bit fast RAM ..£119.99
4mb 32 bit fast RAM ..£204.99

RAM & CUSTOM CHIPS

1mb by 8/9 SIMMS (3 chip)..£28.99 per Mb
4Mb by 9 SIMMS ....£114.99 per 4 Mb
1 Mb by 4 DRAMS..............£42.99 per 1 Mb
1 Mb by 4 ZIPS...............only £39.99 per Mb
256 by 4 DRAM (DILs) ideal for A590 and others
4+ (512K)................................now only £3.49
8+ (1Mb)...............................now only £3.29
16+ (2Mb)..............................now only £3.09
Kickstart 1.3..£27.99
Kickstart 2.04..£35.99
Fatter Agnes 8372A...............................£32.99
Super Denise..£23.99
6571-0326 Keyboard controller..........£12.99
CIA 8520A I/O controller....................£12.99

ACCESSORIES

Real Time A1200 internal clock module..........£14.99
Tecno Plus Pro Midi Interface with Sequencer 1 Plus and 2 midi cables ....only £41.99
Mouse/joystick port switcher....................only £13.99
Computer Video Scart Switch....................only £19.99
2 way Parallel port sharer box inc cable.....only £17.99
Amiga Sound Enhancer Plus by Omega Projects. Hear the Amiga's sound like you've never heard it before!............only £36.99
PRINTERFACE (ADDITIONAL PRINTER PORT FOR THE 1500/2000/3000)..............................£35.99
QUALITY MOUSE MATS..£3.99
20 CAPACITY DISK BOX..£2.99
40 CAP LOCKABLE DISK BOX...............................£4.99
100 CAP LOCKABLE DISK BOX...............................£6.99
*90 CAP STACKABLE BANX BOX.........................£8.99
*150 CAP STACKABLE POSSO BOX.......................£16.99
*add £3.00 delivery if purchasing just one Posso or Banx box. Free delivery when purchased with other product or when buying 2 or more.
AMIGA A500 DUST COVER.......................................£3.99
AMIGA 600 COVER..£2.99
14" MONITOR DUSTCOVER......................................£6.99
12" MONITOR DUSTCOVER......................................£5.99
AMIGA TO SCART CABLES.......................................£9.99
STD 1.8 METRE AMIGA PRINTER LEAD....£4.99
MODEM AND NULL MODEM CABLES.........£9.99
2 WAY Parallel port sharer.....................................£17.99

DISKS

All 3.5" disks are GUARANTEED FOR A LIFETIME & are CERTIFIED 100% ERROR FREE. Our DS/DD disks are high quality magnetic media & are extensively used by duplicating houses

QTY	3.5" Bulk	OR	VERBATUM BRANDED
10	£5.29		£6.99
30	£15.29		£17.99
50	£22.99		£28.99
100	£41.99		£54.99
200	£74.99		£99.99
500	£172.99		£POA
1000	£343.99		£POA

Branded disks come complete with labels
Disk Labels....500....now only £6.99
Disk Labels..1000....now only £9.99

SOFTWARE

BUSINESS

Home Accounts 2.................................£37.99
INTERSPREAD..................only £24.99
Mini Office..£38.99
PERSONAL FINANCE MANAGER Plus only £29.99
PLATINUM WORKS....only £39.99!!
Excellent integrated business/office pack, with powerful 123 comp spreadsheet, word processor & database

EDUCATIONAL

6 Pack compendium.....................only £29.99
inc. Kids Type, Weather Watcher, Calender Quiz, Words & Numbers, Game Set & Match + What is it? Where is it?
Childs Play talking word processor...£24.99
Gallery Multi-Media Dbase...........................£44.99

MISCELLANEOUS

A Talk comms Software.............................£9.99
Distant Suns new version!!......................£49.99
GB Route Plus...£45.99
GP FAX Software...£39.99

MUSIC/SOUND

Audio Master version 4..............................£43.99
Audio Engineer Plus V2........................£159.99
Clarity 16 sampler.................................£105.99
Deluxe Music Construction Set...............£49.99
SUPER JAM...£42.99
Techno Sound Turbo....................................£28.99

PROGRAMMING

Amos Creator..£34.99
Amos Compiler..£21.99
Amos 3D...£25.99
Amos Professional..£47.99
DEVPAC 3...£50.99
Easy AMOS...£24.99
GFA BASIC 3.5 Interpretor..................only £19.99
SASC Language Version 6.........................£212.99

UTILITIES

AMIBACK...£39.99
NEW!! AMIBACK TOOLS..................................£46.99
NEW!! AMIBACK PLUS TOOLS BUNDLE...£74.99

AMIGA RELEASE 2 UPGRADE KIT
Complete with: Kickstart 2.04 CHIP, Workbench 2.04, Install, Fonts & Extras disks full manual set
only £77.99

Cross Dos V5...£29.99
Directory Opus 3...£26.99
NEW!! Directory Opus 4.........................£49.99
QUARTERBACK V5.........now only £43.99
Latest version of this Fast & Famous hard disk backup utility.
Quarterback Tools................................now only £43.99
Xcopy Pro inc. hardware...............................£33.99

VIDEO AND GRAPHICS

DIGI-VIEW GOLD MEDIA SYSTEM
Complete graphics presentation package. Complete with Digi-View Gold, Digi-Paint 3 & Elan Performer
now only £119.99

37 Compugraphic fonts Vol 1, 2, or 3 by GT.only £9.99
Adorage (creates special video effects)...................£61.99
Art Department Pro 2.1......................only £129.99
NEW!! ART EXPRESSIONS.........By Soft Logic £145.99
NEW!! BRILLIANCE Pro paint and Animation...£144.99
NEW!! CALIGARI 24 3D Design and animation...£239.99
NEW!! Deluxe Paint 4 AGA.....................................£69.99
EXPERT DRAW...only £49.99
EXPERT 4D JR..only £37.99
Flexidump printer utility..£31.99
Imagine V2...£119.99
Make Path for Vista..£28.99
Morph Plus..£147.99
Pro Draw 3...£69.99
Scala 500..£75.99
TURBO PRINT...£39.99
TRUE PRINT/24...£41.99
VIDEO DIRECTOR..£124.99
VIDEO MASTER...£49.99
NEW!! Vista Pro 3 (2 Mb required)..........................£54.99

WORD PROCESSING/DTP

FINAL COPY UK version 2!!....only £65.99
From the writers of PenPal. inc. built in outline fonts, full graphics import capability (IFF and HAM), UK thesaurus, spelling checker & detector, insert date, time, & page no, crop & scale graphics, multiple columns, magnified & reduced page view & much more.

KINDWORDS V3...........only £36.99
Very similar to Wordworth

PENPAL 1.4..................................only £38.99
Best selling feature packed word publisher with database.

PAGESTREAM 2.2...................only £125.99
Powerful DTP package that we recommend and use.

NEW!! PAGESETTER 3..£42.99
NEW!! Personal Write.......Postscript compatible..£17.99
Hot Links...£48.99
NEW!! PRO PAGE PROFESSIONAL V4....£POA
Pro Page professional V3 DTP...now £99.99
Protext 4.3 W/P....................................now only £39.99
NEW!! Prowrite 3.3..£38.99
NEW PRICE!! THE PUBLISHER DTP.....£31.99
WORDWORTH 2 word publisher.....£72.99

THE CONTENDERS

Meet the gang 'cos the boys are here, the boys to put you in hospital...



NIK
He reckons he's tough, our Nik. You can tell, because he goes around in a baseball cap and ripped jeans. As it happens, he is tough. Being the leader of a local gang, he gets plenty of practice when it comes to punch-ups, and packs a hefty uppercut. Such is his hatred for his elder brother Dan, that he can channel his rage into a bolt of pure electricity.



DAN
Big brother of Nik, Dan has a remarkably similar fighting style. He's also a bit of a gangster, and has perfected the family speciality of lightning bolt emission. He seems a bit of a sad character actually, tagging along in his little brother's footsteps, but when it comes to the crunch, he's as tough as the next man.



JUNIOR
Billed as a 'solid British boxing bulldog', Junior has learned his trade through years of sparring with the best in the world. Now he's thrown Queensberry rules to the wind and wouldn't think twice about giving you a good kicking, above or below the belt. Junior's trump card is a blindingly fast flurry of jabs from his iron fist.

Have Team 17 come up with a contender for *Street Fighter 2's* crown? Tony Horgan dusts off his trunks and prepares to get pasted.

BODY

Opinions on the Amiga version of *Street Fighter 2* seem to be divided. While some maintain that it's a brilliant conversion of the best beat 'em up ever, others say it's a slow, barely playable game that's only got by on the strength of its illustrious coin-op cousin.

If you are of the former opinion, then fine, but I can't honestly say that I am. It could have been a lot faster, and the increase in speed would have resulted in smoother graphics, more responsive controls, and generally far superior gameplay. But it wasn't, and I'm still on the look-out for an Amiga beat 'em up to rival the console offerings. At least, I was, until *Body Blows* arrived.

YOU SPILL MY PINT?

So it's better than the legendary *Street Fighter 2* then? In a word, yes, but of course it doesn't have the 'coin-op in your bedroom' appeal of the latter. If you've fallen for the charms of *SF 2* to such a degree that you can now be found prancing around the house in a pair of red underpants, pretending to be Zangief, then I'd say you need to see a doctor.

Okay, I don't want a show of hands, but if that sounds like you, then it's time you took off your *Street Fighter* blinkers (and put your trousers back on), and introduced yourself to the super-speedy world of *Body Blows*.

CONSOLE YOURSELF

It's a strange state of affairs, isn't it? We're all singing the praises of the Amiga, saying how much better it is than consoles, but one of the highest compliments paid to the best Amiga games is that they're just like their console variants. *Body Blows* fits into that category, thanks to the slick programming and flashy graphics that have made Team 17 one of the most respected developers on the scene.

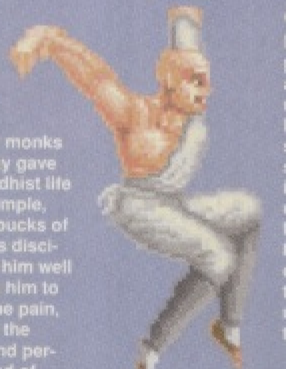
There was bound to be a ninja somewhere, and here he is. Just the sound of that blade is enough to send shivers down your spine.



Here we see Nik and Maria practising their choreography for the big fight scene in Body Blows – The Movie.

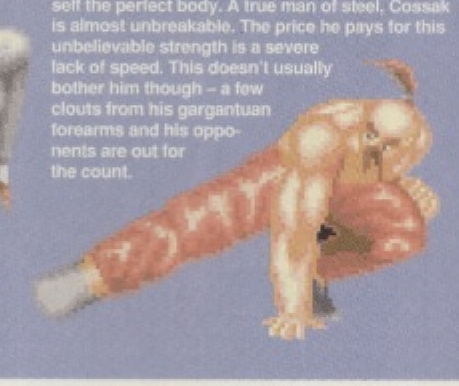






LO RAY
And you thought monks were soft? Lo Ray gave up his strict Buddhist life at the Shaolin Temple, lured by the big bucks of prize fighting. His discipline has served him well though, enabling him to withstand extreme pain, leap around with the agility of a cat, and perform a deadly kind of flying cartwheel move, that never fails to flatten his opponents (well, almost never anyway, but that doesn't sound so good, does it?).

COSSAK
Much as he tries to deny it, Cossak used to be part of the USSR national cossack dancing team, and has a whole cabinet full of trophies and medals proudly displayed back at his mother's home in Moscow. Infuriated that his dancing secrets were revealed, he set about building himself the perfect body. A true man of steel, Cossak is almost unbreakable. The price he pays for this unbelievable strength is a severe lack of speed. This doesn't usually bother him though – a few clouts from his gargantuan forearms and his opponents are out for the count.





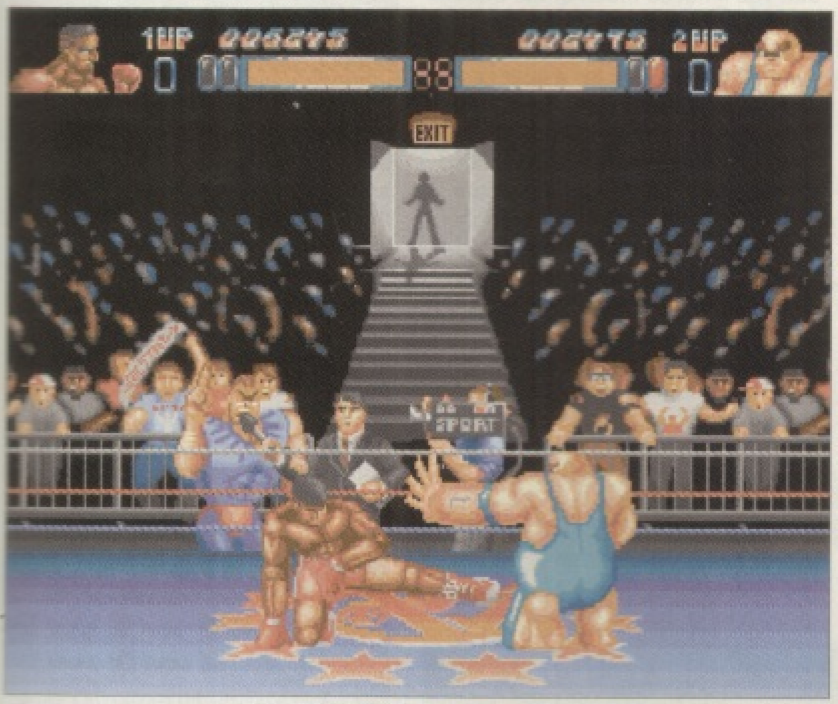
DUG
At last, someone with a sense of humour! Dug is like those old wrestlers you used to get on World of Sport on Saturday mornings (before American wrestling took over). Most of the time he just flails his arms around like a six month-old baby, but his flying body splash is one to look out for. Dug's special move? He's got such a gut on him that he can jump up in the air and cause a mini-earthquake as he lands, sending devastating shockwaves through any opponent.

MARIA
Equal opportunities have given Maria the chance of a bit of a fisticuff with the boys. Lithe in her skin-tight outfit, she uses her stunning looks to distract her opponents from the job in hand. Unfortunately, Maria is rather outclassed in the power stakes, but her speed goes some way to balancing things out. If all else fails, she can call upon her 'spin around very fast and bump into you' special move.



BLOWS





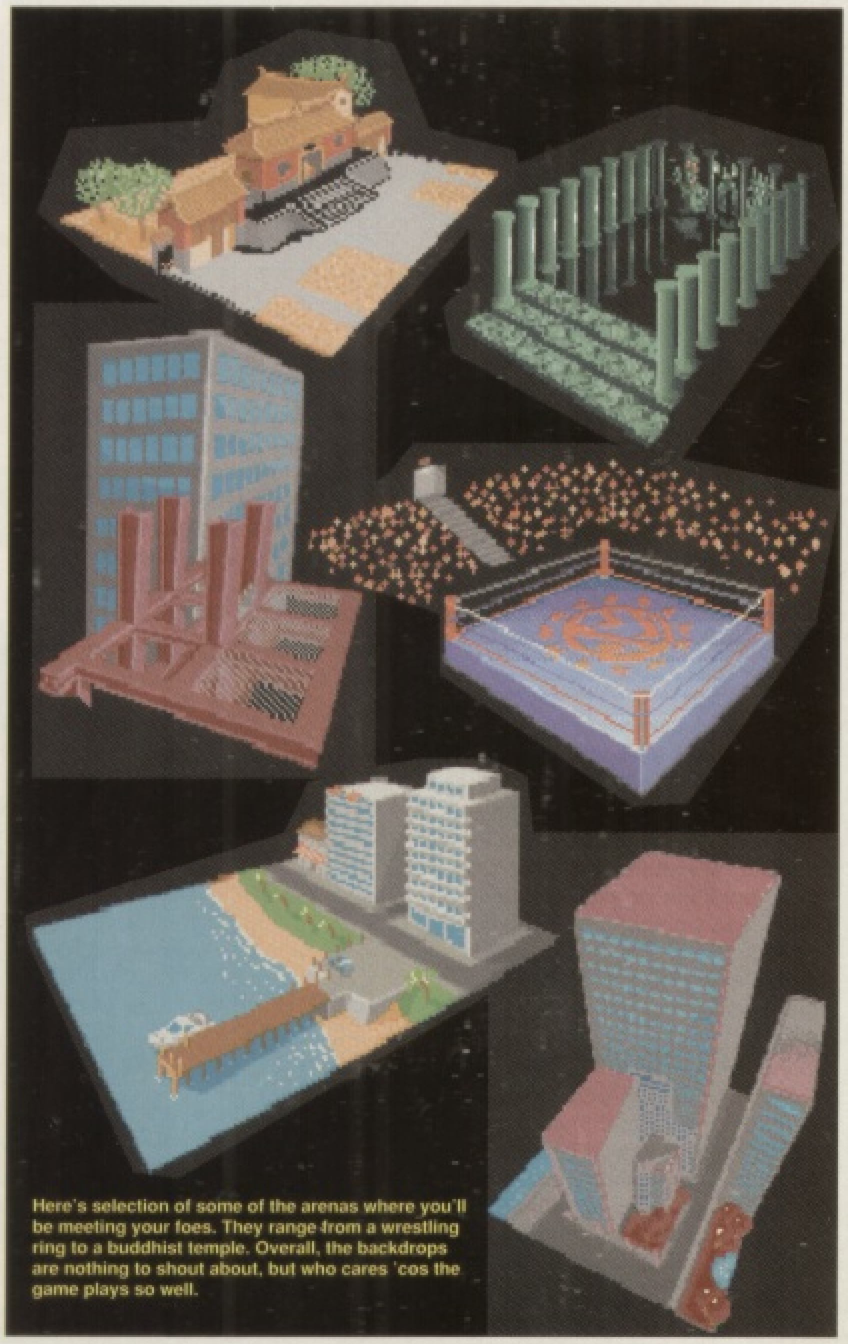
Junior takes on the fat boy at the Wrestling Arena. He's harmless enough, just watch out for that body splash. Be careful if he leaps into the air, 'cos a special move is on the way.



Originality doesn't come into it. We just want a decent arcade beat 'em up, and that's just what *Body Blows* is. It's not enough to just have a couple of characters these days, so this game offers a hefty 11 fighters. In one-player mode, you can choose to play as Nik, Junior, Dan or Lo Ray. Your first four opponents are roughly equal. To keep you interested in the early stages, you're pitted against them in a random order, so even if you're completely useless, you shouldn't find yourself getting pummelled by the same opponent all the time. There are two skill levels for the one-player mode, but you can only complete the game if you play it on the harder level – the easier mode stops the game just before you get to Max, the final big champ.

Two-player mode lets you take control of any character except Max. Player two can choose the same character, which should settle all those 'It's not fair, I've got a weaker character!' arguments. There's also a tournament mode – not a simultaneous multi-player free-for-all unfortunately, but a kind of round robin competition with up to eight human players randomly drawn against each other.

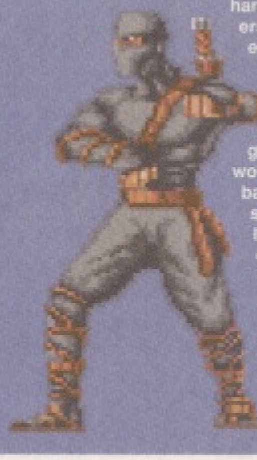
TODAY'S SPECIAL
Apart from a wide variety of characters, the other essential ingredient for a good beat 'em up is special moves. Each character has his or her own



Here's selection of some of the arenas where you'll be meeting your foes. They range from a wrestling ring to a buddhist temple. Overall, the backdrops are nothing to shout about, but who cares 'cos the game plays so well.



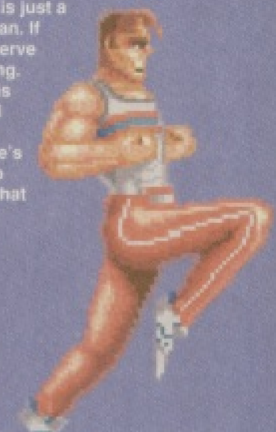
MIKE
Something big in the city, or so he'd like to think, Mike isn't afraid to roll up his sleeves and mix it with the best of them. They call him the Grey Man, but underneath that drab 'man from Accounts' exterior, Mike's actually a bit of a nutter. Like the Raybans concealing his real emotions, his orthodox fighting style conceals his ability to transform himself into a whirlwind.



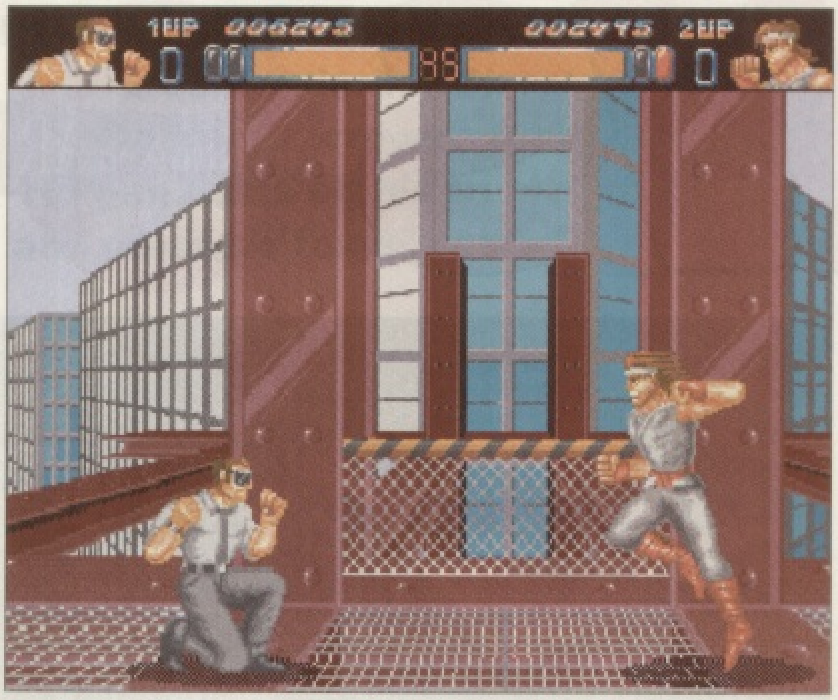
NINJA
Just so you don't forget his name, Ninja insists on yelling it out every time he gets a little distressed. At best, he's a tricky one to handle, using his powers of invisibility to evade your attacks, deftly stabbing you with feet, fists and a glinting blade. At worst, he's a spinning ball of razor-sharp steel and flying limbs. Definitely a cut above your average Ninja.



YIT-U
Yit-U is certainly not a character to be messed with. What he lacks in family history, amusing anecdotes and general personality, he makes up for with a weird special move. One second, he can be at an apparently safe distance on the other side of the screen, but within the blink of an eye, he can turn himself into a blur of proton particles, and rematerialise right in front of you, piling a nose-breaking punch right in your face. Who needs personality anyway?



MAX
The overall champ, Max is just a general all-round hardman. If you get this far, you deserve to give him a right pasting. Whether you will or not is another matter entirely. I won't spoil it for you by spilling the beans, but he's got a pretty dirty trick up his sleeves – all is not what it seems!



Left: Mike's a bit of a banker, by all accounts. Who better than Yit-U to give him a good pasting?

special moves, generally two each, but some have a third. The trouble is, standard joysticks just have a single button, so some of the moves aren't as accessible as they might be. Even so, whoever you're controlling, you've always got a repertoire of high and low kicks and punches, available from the usual fire-button/joystick combinations.

Depending on the current character, you've usually got at least one hot move that's accessible from the normal joystick positions, but for the real super-special 'stitch that mate' moves, you've got to hold down the fire button and store up a bit of 'Chi'. Once your inner strength reaches a climax, you automatically let rip with your trump card (fortunately, minus that irritating 'Hiujit!' grunt that emanates from *SF 2*).

MR SMOOTHIE

So the screenshots look good, it's got loads of tasty features, and best of all, it lives up to all this when it comes to gameplay! If you've played any of Team 17's games in the past, such as *Project X* or *Alien Breed*, you'll know the kind of technical standards to expect. The game runs at 50 frames per second, so the scrolling and sprite animation are really smooth. The other advantage o f the fast pace is the good joystick response – there's none of that horrible squishy feel you get from certain other beat 'em ups.

Some of the backdrops aren't as ornate as *SF 2*, but they're all pretty big, with little incidental animations of bongo-playing Buddhist monks and excited onlookers. It's unlikely that you'll notice much of the background activity though, because the action's so fast you can't take your eyes off the players for a split second. As far as I can tell, there's no 'safe' move.

Even so, the computer-controlled characters could do with a bit more intelligence. The lower-ranked fighters seem to give a more varied performance, drawing on the whole range of moves. As you progress, the fights get a little more predictable: a few blows are exchanged, then the computer player decides he should be winning and launches into a massive attack of special moves, before settling down again, then repeating the process.

The game is at its best in two-player mode. The option to pit any two characters against each other, gives a lot of scope. Whether your sparring partner is completely inept or a video wizard, you can always set up a reasonably matched fight, and best of all, you can both play the same character. *Street Fighter 2* was declared the best ever beat 'em up on the Amiga, but its reign was a short one – *Body Blows* has just taken the title with a knockout in the first round. Slick graphics, a decent soundtrack, and palm-sweatingly frantic gameplay make this one a must for anyone with a penchant for mindless violence. Don't miss this one.



If it's blindingly fast action you're after, *Body Blows* has it by the bucketload.



Sporting a lovely line in Steve Austin track suits, Max clocks Yit-U with a classic karate chop.

TEAM 17 £26.99

A500 ✓	A500+ ✓	A600 ✓	A1200 ✓
A1500 ✓	A2000 ✓	A3000 ✓	A4000 ✓

TEAM 17, MARWOOD HOUSE, GARDEN STREET, WAKEFIELD, WEST YORKSHIRE, WF1 1DX. TEL: 0924 291867.

RELEASE DATE:	OUT NOW
GENRE:	BEAT 'EM UP
TEAM:	IN HOUSE
CONTROLS:	JOYSTICK
NUMBER OF DISKS:	3
NUMBER OF PLAYERS:	1-8
HARD DISK INSTALLABLE:	No
MEMORY:	1Mb

GRAPHICS	84%
SOUND	90%
LASTABILITY	84%
PLAYABILITY	95%

"The best Amiga beat 'em up money can buy"

OVERALL 91%

after, Body

etely inept
n always
hed fight,
oth play
et Fighter 2
er beat
its reign
Blows has
knockout
aphics, a
alm-
ay make
e with a
olence.

.99

A1200 ✓
A4000 ✓

E, GARDEN
YORK-
291867.

OUT NOW
EAT 'EM UP
IN HOUSE
JOYSTICK
3
1-8
No
1Mb

84%
90%
84%
95%

eat 'em

91%



THE BEST DEALS, THE LATEST AMIGA TECHNOLOGY

AMIGA 600 WILD, WEIRD, & WICKED PACK



Comprising the Amiga 600 computer with 1 Mb RAM, 3.5 inch 1 Mb floppy disk drive PLUS mouse, manuals, Workbench 2.0, all connections to your TV set, and the following FREE software:

- MICROPROSE GRAND PRIX
- SILLY PUTTY
- PUSHOVER
- DELUXE PAINT III

all for £319.95 inc.

.... and you can add even more games or accessories with our exclusive added value packs detailed lower down this page.......

ADD A ZOOL PACK FOR ONLY £20 EXTRA! (see details below)

NEW!

ADD A ZOOL PACK FOR ONLY £20 EXTRA! (see details below)

AMIGA 1200

THE NEXT GENERATION AMIGA

- True 32 bit computer with a 68020 processor running at blistering 14Mhz, 5 x faster than previous Amiga's!
- 2Mb of 32 bit memory expandable via smart card slot
- New AA graphics chips give maximum 262,000 colours on screen from a palette of 16.9 million!
- Styled similar to Amiga 600, but includes numeric keypad
- Compatibility mode for existing Amiga programs, whilst new releases will feature Amiga 1200 enhancements
- Includes new Workbench 3.0 operating system

Amiga 1200, only £369.95 inc.

AMIGA 600 EPIC & LANGUAGE LAB PACK

Comprising the Amiga 600 computer with 1 Mb RAM, 20 Mb hard disk drive, 1 Mb 3.5 inch floppy disk drive, PLUS mouse, manuals, Workbench 2.0, all connections to your TV set and the following free software:

- EPIC ● MYTH ● ROME
- TRIVIAL PURSUIT (in 3 languages!)
- DELUXE PAINT III (painting package)
- AMIGA TEXT (Word Processor)
- FIVE LANGUAGE DICTIONARY



ADD A ZOOL PACK FOR ONLY £20 EXTRA! (see details below)

all for £449.95 inc.

.... and you can add more value, either games or accessories, with our packs detailed below ....

AMIGA 1500 PACK

Comprising the Amiga 1500 computer with separate system unit and detachable keyboard, 1Mb RAM and two 3.5 inch disk drives, nine internal expansion slots, Workbench 2.0 and Kickstart 2.0, and the following free software:

- THE WORKS Platinum Edition (Word Processor, Spreadsheet, Database)
- HOME ACCOUNTS ● DELUXE PAINT III
- ELF ● TOKI ● PUZZNIC ● GET THE MOST OUT OF YOUR AMIGA BOOK

all for £539.95 inc.

AMIGA 3000

Comprising the Amiga 3000 computer with separate system unit and detachable keyboard, fast 25Mhz processor speed, 2Mb RAM and one 3.5 inch disk drive, latest version 2.0 machines, available with the following hard drives:

52Mb hard drive £1299.9
105Mb hard drive £1479.9
1935 SVGA monitor £259.95
1960 multisync monitor £419.9

AMIGA 600 DELUXE PAINT & GAME PACK

Complete Amiga 600 computer, with 1 Mb RAM, 3.5 disk drive, one game (normally Lemmings) and Deluxe Paint III. **£269.95 inc.**

AMIGA 4000 MULTI-MEDIA SYSTEM

New awesome multi-media platform featuring 68040 32 bit processor running at 25Mhz, new AA chipset with 16.9 million colours, 6Mb RAM and high density 3.5 inch disk drive, latest Workbench 3.0 operating system

A4000 40Mb HD **£1999.95**
A4000 120Mb HD **£2199.95**

AMIGA 500+ CARTOON CLASSICS PACK



ADD A ZOOL PACK FOR ONLY £20 EXTRA! (see details below)

Comprising the Amiga 500 plus computer with 1 Mb RAM, 18 key numeric keypad 1 Mb 3.5 inch floppy disk drive, PLUS mouse, manuals, Workbench 2.0, all connections to your TV set and the following free software:

- LEMMINGS
- THE SIMPSONS
- CAPTAIN PLANET
- DELUXE PAINT III

all for £269.95 inc.

.... and you can add even more games or accessories with our exclusive added value packs detailed below........

CDTV ENTRY PACK

CDTV player complete with remote controller, plays audio CD's, CD audio plus graphics disks, and Amiga interactive titles, comes complete with the following software:

- WELCOME DISK
- HUTCHINSONS ENCYCLOPAEDIA
- LEMMINGS (the award winning game)

all for £369.95 inc.

AMIGA CDTV PACK

MULTI-MEDIA SYSTEM

Combination of the CDTV and an Amiga compatible computer including CDTV player, black Amiga keyboard, infra-red mouse, 3.5 inch black Amiga disk drive, Wokbench disks and remote control

all for £469.95 inc.

......ADD MORE GAMES, MEMORY OR ACCESSORIES WITH OUR VALUE ADDED PACKS

ZOOL PACK

Includes:
- ZOOL - 97% rated AMIGA COMPUTING
- STRIKER - 94% rated CU AMIGA
- PINBALL DREAMS - 94% rated AUI
- TRANSWRITE - premier word processor

....worth over £127 in total!

ONLY £20 EXTRA!

AWARD WINNERS PACK

Includes four award winning games:
- KICK OFF 2 ● PIPEMANIA
- POPULOUS ● SPACE ACE

....worth over £122 in total!

ONLY £10 EXTRA!

PHOTON PAINT

(THE 4096 colour painting program)

+

GFA BASIC

(essential for writing your own programs)

ONLY £10 EXTRA!

ACCESSORIES PACK

Essential extra's including, Zipstick Super Pro joystick, 10 blank 3.5 inch disks, lockable 40 capacity disk box, high quality mouse mat and dust cover

ONLY £20 EXTRA!

EXTRA 1Mb RAM

for A500 ADD £30
or A600 ADD £35

FUTURETECH

Orderline & enquiries telephone (0908) 211665 open 7 days a week 9am-7pm

LOGY
200
ON AMIGA
ssor running at
s Amiga's!
mart card slot
62,000 colours
numeric keypa
ograms, whilst
hancements
ystem
9.95 inc
3000
3000 computer w
t and detachable
processor speed
5 inch disk drive
0 machines,
owing hard drives
e £1299.9
ve £1479.9
itor £259.95
onitor £419.9
STEM
40Mb HD
99.95
120Mb HD
99.95
TV PACK
MEDIA
TEM
f the CDTV
patible computer
TV player,
, infra-red mous
iga disk drive,
remote controll
9.95 inc.
PACKS
EXTRA
Mb RAM
for
A500
DD £30
r A600
DD £35

......AND WE DELIVER FREE, DIRECT TO YOUR DOOR!

PHILIPS 8833 MKII COLOUR MONITOR



The best selling monitor for the Amiga giving a crystal clear colour display together with fantastic stereo sound!

- FREE LOTUS TURBO 2 GAME
- FREE AMIGA CABLE
- 12 MONTHS IN-HOME SERVICE
- OFFICIAL UK PRODUCT

all for £179.95 inc.

tilt & swivel stand £10.95
dust cover £3.95

PRINTERS

Canon · CITIZEN · star MICRONICS · HEWLETT PACKARD

...nters include ribbons & Amiga cable!

120D 9 pin mono	£109.95
SWIFT 9 pin colour	£169.95
SWIFT 200 24 pin mono	£194.95
SWIFT 200 24 pin colour	£214.95
SWIFT 240 24 pin mono	£244.95
SWIFT 240 24 pin colour	£264.95
LC20 9 pin mono	£119.95
Star LC100 9 pin colour	£149.95
LC200 9 pin colour	£169.95
Star LC24-100 24 pin mono	£184.95
LC24-200 24 pin mono	£199.95
LC24-200 24 pin colour	£239.95
XB24-200 24 pin colour	£359.95
SJ48 inkjet	£194.95
Laserjet 4 laser	£699.95
Laserjet 4 postscript laser	£949.95
BJ10ex inkjet	£219.95
BJ20ex inkjet inc. s-feeder	£309.95
BJ300 inkjet	£369.95
BJ330 wide carriage inkjet	£489.95
Deskjet 500 mono inkjet	£324.95
Deskjet 500 colour inkjet	£449.95

...Feeders

SWIFT manual sheet feeder	££27.99
SWIFT auto sheet feeder	£74.99
LC20 auto sheet feeder	£57.99
LC100 auto sheet feeder	£59.99
LC200 auto sheet feeder	£59.99
LC24-100 auto sheet feeder	£62.99
LC24-200 auto sheet feeder	£62.99
SJ48 auto sheet feeder	£49.99
BJ10ex auto sheet feeder	£49.99

GENUINE RIBBONS	MONO		COLOUR	
	one £	six £	one £	six £
120D	3.95	20.95	-	-
SWIFT series	4.45	21.95	15.95	92.95
LC10,LC20,LC100	4.25	22.95	5.45	30.95
LC200	5.45	30.95	11.95	63.95
LC24-200	6.45	36.95	12.45	67.95
SJ48, Canon BJ	15.45	89.95	-	-
Deskjet	21.45	125.95	25.45	149.95

HARD DRIVES

GVP Hard Drive 8 for A500 & A500 plus	52Mb drive £	120Mb drive £
with no RAM fitted	329.99	429.99
with 2Mb RAM fitted	369.99	469.99
with 4Mb RAM fitted	409.99	509.99
with 8Mb RAM fitted	489.99	589.99

GVP A530 COMBO, a hard drive and 68030 accelarator for the A500 & plus	52Mb drive £	120Mb drive £
with 1Mb RAM fitted	659.99	759.99
with 2Mb RAM fitted	699.99	799.99
with 4Mb RAM fitted	799.99	899.99
with 8Mb RAM fitted	979.99	1039.99

68882 maths co-pro for A530	£219.95
PC 286 emulator for GVP HD 8	£189.95

GVP hard card 8, a combined hard drive and RAM board for the A1500 & A2000	52Mb drive £	120Mb drive £
with no RAM fitted	279.99	409.99
with 2Mb RAM fitted	319.99	449.99
with 4Mb RAM fitted	359.99	489.99
with 8Mb RAM fitted	439.99	569.99

CDTV ROM DRIVE

Allows your Amiga to play CDTV titles and music CD's. Models for 500/+/600/1200

only £269.99

FLOPPY DRIVES

Cumana 3.5 inch 1Mb drive	£49.95
Roctec roclite 3.5 inch 1Mb drive	£59.95
Power PC880E 3.5 inch 1Mb drive	£47.95
Power PC880B 3.5 plus BLITZ	£57.95
Power PC880B 3.5 plus X-Copy	£72.95

MEMORY

512K RAM exp. for A500 & plus	£17.95
512K RAM & clock exp. for A500	£22.95
1Mb RAM exp. for A500 plus	£34.95
1Mb RAM exp. for A600	£32.95
1Mb RAM & clock exp. A600	£37.95
2Mb RAM smartcard A600 & 1200	£114.95
4Mb RAM smartcard A600 & 1200	£174.95

SIMM BOARDS

1Mb SIMM suitable for GVP HD8 etc	£21.99
4Mb SIMM suitable for GVP HD8 etc	£88.99
1Mb 32bit SIMM for GVP Combo etc	£51.99
4Mb 32bit SIMM for GVP Combo etc	£151.99

ROMS & SHARER

Kickstart 1.3 ROM	£23.99
Kickstart 2.0 ROM	£34.99
Keyboard switchable ROM sharer A500	£16.99
New! A600 ROM sharer	£28.99
Official Commodore V2.0 upgrade kit, inc. V2 ROM, V2.0 disks & manuals	£79.99

CUSTOM CHIPS

CIA 8520A I-O chip	£7.99
Super Denise custom chip	£21.99
Fatter Agnus 8372A custom chip	£30.99

SCANNERS

Power B&W scanner, 64 greyscales, up to 400 dpi, editing software inc.	£94.99
New! Power colour scanner, 4096 colours, up to 400 dpi, software inc.	£229.99

MICE, TRACKBALLS

Naksha upgrade mouse inc. freebies	£23.99
Squik quality replacement mouse	£11.99
Golden Image mega mouse	£12.99
Golden Image crystal trackball	£36.99
Zydec trackball	£29.99
High quality 8mm mouse mat	£3.49

3.5 DISKS, BOXES

10 3.5 1Mb bulk 100% certified	£4.95
25 3.5 1Mb bulk 100% certified	£10.95
50 3.5 1Mb bulk 100% certified	£19.95
100 3.5 1Mb bulk 100% certified	£37.95
500 3.5 1Mb bulk 100% certified	£174.95
Box of 10 branded TDK 3.5 1Mb	£7.95
Box of 50 branded TDK 3.5 1Mb	£37.25
Box of 100 branded TDK 3.5 1Mb	£69.95
10 capacity 3.5 disk box	£1.49
40 capacity 3.5 disk box - lockable	£2.95
80 capacity 3.5 disk box - lockable	£4.95
500 3.5 disk labels	£5.95
1000 3.5 disk labels	£8.95

JOYSTICKS

Quickshot II Turbo	£8.95
Quickjoy Jetfighter	£10.95
Quickjoy Topstar	£17.95
Quickjoy Superboard	£16.95
Zipstick Super Pro autofire	£10.95
Competition Pro autofire, burstfire	£12.95
Voltmace Delta 3A analogue	£7.95

CONTROL CENTRES

View centre, monitor stand only:	
A500 & A500 plus version	£24.95
A600 version	£20.95
Control Centre, monitor stand & shelf:	
A500 & A500 plus version	£39.95
A600 version	£34.95
Super Control Centre, monitor stand & two shelves:	
A500 & A500 plus version	£54.95
A600 version	£49.95

We offer you

- Free delivery in the UK
- All prices include VAT
- Price match
- Computerised ordering
- Staff with 10yrs experience of Commodore products
- Free catalogues
- 12 month warranty on all products (in-home service on Amiga's and Philips monitors)
- Free collection of product in warranty period, if necessary

How to order

Call our orderline shown below if you have a credit or debit card, or if you have any queries before you purchase. Be ready to quote your card number, expiry date and your name, address and contact telephone number.

OR, send your order into us at the address shown below, together with your personal cheque or a bank or building society draft made payable to, Futuretech Consumer Electronics Ltd. Please state your requirements clearly, along with your name, address and telephone number.

FUTURETECH
Unit 3, Frederica
Caldecote Street
MILTON KEYNES
MK16 0DD
Telephone (0908) 211665
Fax (0908) 217984

Access · VISA · MasterCard

Prices and specifications are subject to change without prior notification. E & O E. Goods are sold subject to availability and are not supplied on a trial basis. Personal cheques require 7 days to clear. Futuretech is Futuretech Consumer Electronics Ltd (registered in England). All trademarks acknowledged.

CALL US NOW AND ASK FOR YOUR FREE AMIGA CATALOGUE!

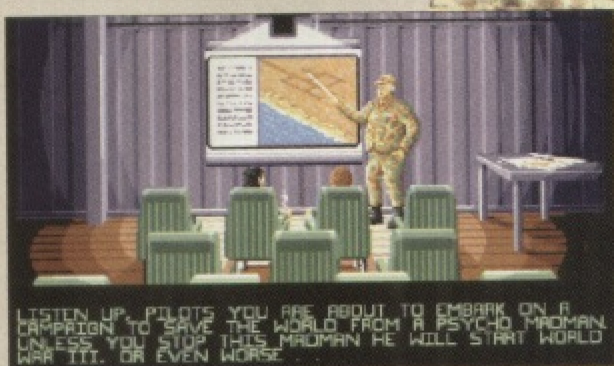
FUTURETECH

Orderline & enquiries telephone (0908) 211665 open 7 days a week 9am-7pm

m







The intro sequence shows barking mad dictator, General Kilbaba, explaining his plans for world domination to a terrified aide. Once you're into the main game a special briefing takes place before each mission detailing all the targets you need to take out. Good luck – you're going to need it.



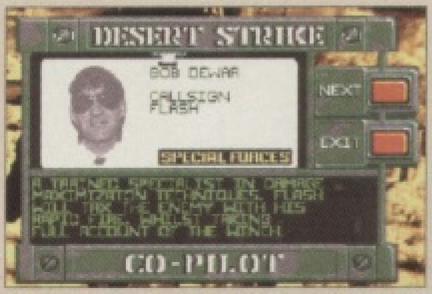
Dan's always wanted to get his hands on a big chopper, so when we gave him a copy of Electronic Arts' latest shoot 'em up, he got all hot and bothered. One cold shower later and here's his review...

All missions begin here. Power up the rotors, arm your weapons and get blasting!

DESERT STRIKE



Warning, warning! You are about to be blown to smithereens. Caught in enemy crossfire, one more hit and your armour shielding will be destroyed.



Choose your co-pilot carefully. Most are crap. The best one has to be rescued.

CU AMIGA SCREENSTAR

Desert Strike is about as close as you'll get to experiencing the thrills and spills of a modern military engagement – unless, of course, you have a multi-billion dollar defence budget. Put in the cockpit of a lone Apache helicopter gunship, your ultimate objective is to prevent a tin-pot dictator, General Kilbaba, from developing a nuclear bomb and holding the West to ransom. The action's set in the Middle East, hence Kilbaba's striking resemblance to Saddam Hussein, and involves four campaigns, each made up of a number of specific missions. In all, there are more than 27 missions to complete before Kilbaba's corrupt regime is destroyed.



The original Megadrive version topped the charts for months on end, and it looks likely that the same will happen with the Amiga conversion. The programming team may have taken their time finishing it off (the lazy sods were supposed to finish it in time for last Christmas!), but the wait has definitely been worthwhile.

Most of the game's graphics have been completely redrawn or touched-up and the sound effects cranked up a notch or two. Extra frames of animation have been added to the main helicopter sprite, making it look much more realistic as it swoops about the sky, and the animated intro screens and overall presentation have been significantly improved. So much so, in fact, that the Amiga conversion is far superior to the Megadrive or SNES versions currently doing the rounds – so tell that to your smug console-owning friends!

LETHAL WEAPONS

Missions typically involve knocking out tracking sites, rescuing hostages, bombing runways, blowing up chemical weapons plants and shooting anything that moves. You've got a full complement of state-of-the-art weapons on-board, including a chain-gun for taking out ground troops and several laser-guided Hellfires capable of reducing the largest targets to a smouldering heap of rubble. Unfortunately, you've only got a finite supply of ammo, so extra supplies have to be picked up from drop sites scattered around the map. The same also holds true for fuel, so frequent sorties have to be carried out to replenish supplies before the rotors fail and your 'copter crashes to the ground. Soaking up enemy fire isn't a good idea, either, as each hit significantly reduces the Apache's armour plating. Ground fire isn't too much of a problem, but heat-seeking anti-aircraft missiles are capable of diminishing your armour at an alarming rate. As you only have two 'copters in reserve, it's best not to be too gung-ho in your approach. Again, re-supplies can be picked up from special drop sites or by stealing enemy supplies.

Your co-pilot operates the gunship's targeting system and the winch for picking up supplies and ground troops. There's a choice of co-pilot at the start of each campaign – most are either good winchmen or expert shots, but rarely both. It's all a bit frustrating, especially when you're practically hovering above a target, watching your shots go wide of the mark. Luckily, there is always one effective co-pilot available, it's just a question of finding out which one!

Another aid in your one-man war is the Apache's on-board computer, called into play by pressing F10 on the keyboard. From here, a detailed map of the mission area is displayed; this is useful for locating key installations, enemy gun emplacements, ammo dumps and fuel pick-ups. It also monitors fuel consumption, the number of missiles left and armour points – but why this information couldn't have been included on the main screen I don't know. Status and mission windows give a breakdown of the campaign so far and detail the

JOYSTICK WARS

In the States, *Desert Strike* caused quite a storm (no pun intended) when it was originally released on the Megadrive. Many people felt it came just a little too soon after the end of the Gulf War and there was even one celebrated incident of a group of American vets (ex-soldiers rather than budding James Herriot-types) burning a number of copies of the game to show their disgust. Whatever the moral implications of the game, it's slightly ironic that EA should have brought out a shoot 'em up based on Operation Desert Storm. After all, the Gulf War was nicknamed the 'Joystick Wars' because of all the hi-tech, remote-controlled hardware used to bomb the Iraqis into submission. In fact, one pilot returning from a bombing mission was quoted as saying the war was just like playing a video game, only this particular 'game' cost billions of dollars to take part in!

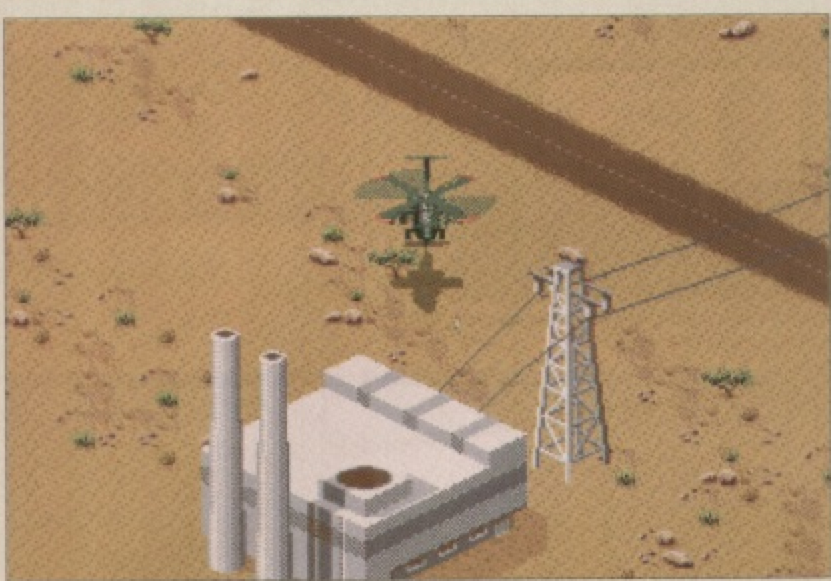


MCDONNELL DOUGLAS AH-64A APACHE

Dubbed the ugliest military helicopter ever built, the Apache AH-64A is also one of the most sophisticated battlefield helicopters of all time. Named in honour of the legendary Apache Indian warriors, it's equipped with a fearsome array of weapons, including a chain gun capable of pumping out 625 rounds per minute, conventional folding fin rockets and laser-guided Hellfire missiles with a range of 3.7 miles. Its two GE T700-701 turbo-shaft engines can generate 1,694 horsepower with a top cruise speed of 187mph. The Apache can also climb faster than most jet airliners and absorb a straight-down impact at 20 feet per second. The airframe has been constructed to collapse in on itself, giving the crew a 95 per cent chance of walking away from a crash at anything up to 42 feet per second – how they actually came up with this figure, though, is something I'd rather not find out. Its twin engines are mounted more than six feet apart to minimise the chance of both being simultaneously damaged by enemy fire. Another safety feature are the blast shields which separate the pilot and co-pilot. If one crew member is injured there's a good possibility that the other will remain unhurt and continue flying the craft. The exhaust system also incorporates three secondary nozzles that suck in cooling air which is mixed with the exhaust. This helps reduce the exhaust temperature by up to a half, thus minimising the engine's infra-red signature and making it virtually undetectable by heat-seeking guided missiles. Carrying enough fuel to keep airborne for 1.3 hours and able to cover 330 nautical miles, extra fuel tanks can be added so that the Apache is capable of crossing the Atlantic under its own power (without the need for mid-air refuelling!). The US Airforce now has 34 attack battalions of Apache helicopters with more than 614 'copters in service at any one time.



Hellfire missiles can tear a building apart in seconds, but it's pointless using them on an undefended weapons factory. Save them for the SAM and Anti-Aircraft sites.



One noticeable improvement over the Megadrive version is the enhanced graphics. Everything simply looks more polished.

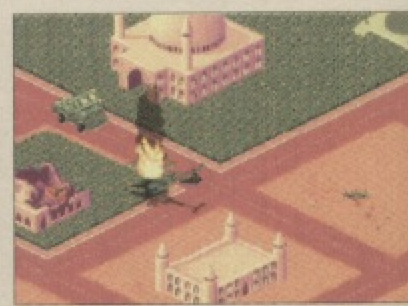
remaining targets.

The in-game action is viewed from an isometric, three-quarters top-down perspective and the screen scrolls in eight directions, panning out in front of the 'copter as it's guided across the desert terrain. It's possible to configure the controls so that either the joystick, mouse or keyboard can be used, although I found the mouse controls virtually unplayable. The joystick is also a problem because the keyboard is needed to access the map screen and toggle between the three different weapons. This can be a bit of a distraction, especially when you're in the thick of things. Sega's joypad was much more effective, as everything could be accessed via its three buttons.

SOUND AND VISION

Graphically, the game looks a treat. Everything has been rendered in the Amiga's 64-colour extra half-brite mode and the battlefield atmosphere is enhanced further with huge palls of smoke drifting across the desert and burnt-out wrecks littering the area. Much of the game's military hardware has been redrawn and the weedy explosions of the original have also been ditched in favour of digitised effects that resemble mini-Hiroshimas. Even the sound is top-notch, with sampled gunfire, monitor-shaking explosions, and the death screams of enemy troops heightening the on-screen action. The whirr of the 'copter's rotor blades speed up or slow down in sync with the craft's speed and an on-board computer voice warns when supplies are getting low or if you're entering a designated danger zone. Best of all is the screeching launch of a Hellfire missile and the rattle of the chain gun as you wreak your vengeance on the enemy forces – they're some of the best samples I've heard in an Amiga game for quite a while.

But great graphics and sizzling samples don't necessarily guarantee a good game, as any Spectrum owner will quickly tell you. Fortunately, Desert Strike is simply amazing to play. Once you've started a campaign, you just won't want to stop. There's so much to do and each mission is refreshingly different from the last. Once you've mastered the Apache's controls, this is real seat-of-the-pants stuff with hardly any let-up in the action. Most of the gameplay remains true to the Megadrive original, although some



Soak up too many hits and your 'copter crashes to the ground in a fireball.

missions have been made a little harder or easier as a result of feedback from EA's playtesters. One important change, though, is the near indestructibility of your MIAs. 'Friendly fire' has become a bit of a contentious issue since the Americans managed to kill off more of their own troops than the Iraqis were capable of, so EA have decided to imbue your lost men with a near-Kryptonite invulnerability. This means that no matter how many Hellfires you shoot into their midst, they'll still be left standing once the smoke has cleared. Fortunately, some of the other characters in the game, such as a lost TV crew, are not so invulnerable and can be reduced to crispy cinders with a well-placed missile. That's definitely more like it!

Another quibble is the sheer stupidity of the opposition forces. If you position your gunship so that a target

MISSIONS IMPOSSIBLE

As the US's top fly boy, you've been chosen to pilot a lone Apache 'copter in a series of covert operations against General Kilbaba's regime. Be careful out there!

CAMPAIGN ONE AIR SUPERIORITY

It's important to establish air superiority right away. Knock out the two radar sites first, otherwise the enemy's defences will be able to automatically track your chopper as it flies across the desert. Each site is guarded by a couple of AAA batteries. These can be picked off with your chain gun while you remain outside their range. Your next target is the power station. It's relatively undefended, but is heavily armoured. Don't be tempted to use your valuable Hellfires though – keep plugging away with the chain gun and it'll eventually explode in a huge fireball. Once that's taken care



of, it's time to take on the heavily fortified airfields. There are two to take out and they're surrounded by Rapier SAM sites, AAA batteries, and a whole host of other such goodies. Extreme caution is advised. Even when you've polished off most of the perimeter defences there are still the mobile rocket launchers to take care of as well as some suicidal foot soldiers who just won't quit until you've reduced them to a pile of cinders. Keep an eye on your fuel supplies as this part of the campaign is extremely time consuming and you'll probably have to refuel a couple of times during your raid. The command centres are also heavily defended with sentries and missile banks forming an outer ring around the complex. Once you've negotiated your way past that lot, the real heavy stuff is wheeled into play and the air becomes thick with triple 'A' and heat-seeking missiles. This isn't a time for heroics, so hover just outside the perimeter and pick off your targets one by one. This might take some time, but it's better than charging in and getting your rotors shot to pieces. When the command centre falls, pick up the fleeing commander who will give you details of where the American spy is being held hostage. After locating and freeing your compatriot, leg it back to the frigate for some well deserved victory celebrations.

CAMPAIGN TWO SCUD BUSTER

Now that you've established air superiority it's time to turn your attention to the enemy's scud launchers. As in the first mission, it's wise to take out the radar sites first. They're even better protected than the first two, but if you keep a cool head you should be able to accomplish it without taking too many hits. Now it's time to start a jail break and free your imprisoned compatriots. The area around the jail must be



made safe before you blast open the building, otherwise the fleeing prisoners will be picked off with sniper fire before they can be picked up. After winching the prisoners to safety, another power station has to be decommissioned, as well as a heavily fortified chemical weapons complex. This one will take all your Hellfires to complete. Once you've reduced the chemical weapons facility to a pile of rubble, the fleeing commanders need to be captured. After a brief interrogation, they'll give you the location of all the Scud missile launchers. It's now a question of flying from one site to the next, blasting each one into oblivion. It's a race against time, though, as they must be destroyed before they can launch their own missiles. At least five of the six launchers must be taken out before the mission can be deemed a success.

CAMPAIGN THREE EMBASSY CITY

Things really start to hot up now! This huge campaign involves eight

comes between you and an enemy gun emplacement, the idiots will launch a volley of shots in your direction and do your job for you. It's also possible to sneak up on a target and stay just out of range of its guns while you pick it off – sometimes they're not even aware of your presence which seems a little crazy when you're blasting away with all guns blazing. The only other complaint is the excessive number of shots it takes to dispose of some of the bigger installations. It's obvious padding to stretch out the action, but it isn't really necessary as there's tons to do anyway.

But I'm nit-picking really, as the game is probably the best blaster I've ever played on the Amiga. It's been programmed by Gary Roberts, the brains behind the excellent conversion of *John Madden* last year, and everything about it shouts class. It's the little details that really make it stand out, such as the large number of fire-fights and the sand particles thrown up as a stream of bullets rip into the desert. Even when you've completed a campaign, there's still lots to do if you don't want to head back to base straight away. And there's always the incentive to keep on playing to improve your high-score.

The mix of low-level strategy and shoot 'em up action is a curious but successful combination. It might seem a chore to have to continually replenish the Apache's supplies in the heat of battle, but the game would be much duller if the strategy elements had been left out. In fact, the finished game has a special 'fire-and-forget' cheat which will give you unlimited ammo so you can play it as an out-and-out shoot 'em up. All things considered, *Desert Strike* couldn't be a better game. The mix is just right, the action fast and frantic and the missions suitably varied to keep you coming back again and again. It's got the just-one-more-go appeal that so many of today's games seem to lack. Thoroughly recommended.

TOOLING UP

Your Apache comes equipped with three different types of weapon. The Chain Gun isn't very powerful, but fires rapidly and is great for taking out ground troops and unprotected buildings (although this might take a long time!). Hydra missiles form the second part of your 'copter's arsenal. These are fairly weak, but the Apache does carry 38 and they can prove effective in polishing off ground based targets such as anti-aircraft guns and mortar emplacements. Leaving the best until last, Hellfire missiles are the most devastating weapon in your armoury capable of taking out even the most well-protected enemy installations. Unfortunately, you're only equipped with eight at a time, so use them sparingly.





By pressing F10, you can call up your on-board computer. This details essential information such as fuel and ammunition levels as well as mission breakdowns and a map of the campaign area.

separate missions and each must be carefully planned if you're not to run out of fuel halfway through. The first mission involves rescuing a team of United Nations inspectors who are under attack in a hotel's car park. There's an enemy tank to take care off plus a legion of ground troops equipped with snipers and jet-propelled missile launchers. Be careful not to hit the inspectors or you'll have to start the mission again. The next target is a biological weapons complex on the city's outskirts. The chief scientist resides in one of eight identical looking buildings. Each one has to be destroyed and the scientist captured. He'll give you the location of the underground missile silos which should be your next objective. These are covered by sand dunes and are difficult to locate at first. Pepper the desert with shots from your chain gun to find them. Listen out for the metallic clanging sound as your bullets bounce off the silo's armoured covering. Again, you must prevent any missiles being fired. It's best to collect any nearby ammo crates or fuel drums before you start blasting as once the missile silos explode any supplies in the vicinity could be caught up in the blast. The action now takes on a nautical theme as you're requested to rescue several pilots who have had to ditch their planes in the Gulf. It's a fairly easy mission, but watch out for the speed boats which spew out an endless stream of bullets. Next up is yet another power station to blow away! This one houses a special radar system which protects General Kilbaba's personal yacht which is being used as a floating prison. Once radar cover has been knocked out, fly to the yacht, blast a hole in its side and rescue the prisoners from the sea by winching them out of the water. You have to be quick, though, as they're weak and can't stay afloat for long. Once you've secured the area, head for the enemy's embassy. Your objective here is to capture their ambassador and rescue the 12 officials who are being held captive. You're in for one hell of a fire fight here as the whole of Kilbaba's army appears to have converged on the area. Most deadly are the enemy helicopters that swoop down like birds of prey. There are also the usual gun emplacements, ground troops, tanks and other military hardware to overcome. It's not possible to blast through this stage of the game without re-arming, so make sure you've located an ammo dump before moving in. Your co-pilot is needed to drive a bus to ferry the hostages to a safe heaven – it's incredibly vulnerable to enemy fire, so needs to be escorted all the way by the Apache.



CAMPAIGN FOUR NUCLEAR STORM

In a spot of environmental consciousness, the fourth campaign involves protecting the oil fields from Kilbaba's henchmen. This necessitates taking out all the enemy tanks that surround the fields and dropping off a group of commandos to secure the area. There are a couple of crippled oil pipes, though, and these need to be closed down. This is done by firing at the end of the pipe to stop the oil gushing out. Once done, a special briefing appears on screen, detailing the rest of this top secret mission. We're not going to give too much away, but you'll find yourself in a race against time to stop Kilbaba launching a nuclear strike against the West. Good luck, the world is depending on you!



E.A. £29.99

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓
A1500 ✓ A2000 ✓ A3000 ✓ A4000 ✓

ELECTRONIC ARTS, 90 HERON DRIVE, LANGLEY, BERKS, SL3 8XP
TEL: 0753 549442

RELEASE DATE:	EARLY MAY
GENRE:	STRATEGIC SHOOT 'EM UP
TEAM:	IN HOUSE
CONTROLS:	J/M/K
NUMBER OF DISKS:	3
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	No
MEMORY:	1Mb

GRAPHICS	90%
SOUND	91%
LASTABILITY	93%
PLAYABILITY	94%

"The best shoot 'em up on the Amiga bar none"

OVERALL 93%

LIONHEART



Left: A fine-looking hero, Lionheart comes complete with flaming locks and hero-type pectorals.

Everyone loves a hero, especially if he moves well. Garth Sumpter blunders around with the latest...

Valdyn, known to his friends as Lionheart, isn't your old-fashioned hero. He's got more in common with Oliver Reed than Errol Flynn. But that's the reason that the king has now contacted him – he's been singled out for his reckless courage and his known fierceness – to recover a holy relic that has been stolen by Norka, an enemy of the king. What makes his task so crucial is that the relic proves the king's right to rule and is due to be shown publicly in just three days' time.

Just by coincidence, the relic happens to share Valdyn's nickname, and the king informs him that it is his destiny to recover the Lionheart, thereby absolving himself of any regal guilt, and Valdyn of any excuses for not taking part in this mission. To reinforce his commitment, the king tells him that his beloved Ilene was turned to stone in the raid and the only antidote lies within his enemy's castle.

HEIGH–HO

And so, armed only with a sword, determination and seven continues, Lionheart sets off to find Norka. At the beginning of play you can set the difficulty level, try out the different tunes and even determine the joystick controls – you can set the game up to use a two-button joystick if you prefer. To take out his frustrations, our hero is equipped with a sword which he draws with a flourish whenever you hold down the fire button. Moving the joystick now has him make various sword-swinging attacks, but any successful attacks by the enemy reduce his energy, which is depicted by bright red hearts.

Valdyn's energy can be increased by picking up crystals as you go through the game, and even his original sword can be replaced with a better one as shown by the numerical value that appears next to it in the display. But combat is only one of his concerns – to traverse the various levels, he must use his athletic abilities too.

Scattered around Norka's land are energy crystals that are normally found in the trickier recesses of whatever level you may be on. There are platforms and steps, cut into trees and rocks, which Valdyn must ascend by jumping and climbing ropes. His jumps can also be measured for different heights and lengths. If you hold the joystick up longer, he jumps higher; if he's running down a slope when he jumps, he jumps farther.

EN-GARDE!

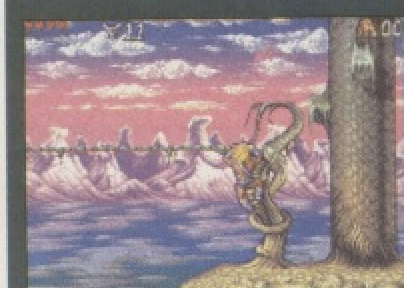
Each level in *Lionheart* is stacked with danger and puzzles, all of which show off the character's animation. Small monsters, like the green maggots from the giant fly, just move along the ground and cannot be hit with a sword but must be dispatched with a squelching sweep kick. There really isn't anything new here – so why is the game so good? It's the attention to detail and feeling of quality that you get when you play. Animation is excellent; Valdyn's teetering on a ledge when he needs to jump not only looks impressive but also becomes an integral part of the game. The fighting when he's actually hanging from a rope and especially when he's climbing onto the top of it to either turn tightrope walker or jump for an otherwise unattainable platform are all excellent and worthy of note. If you're a fan of arcade adventures, this game will be a welcome addition to your collection.



There are lots of platform-type puzzles involved, with springy leaves and even strange whirling platforms that require perfect timing.

CUNNING STUNTS

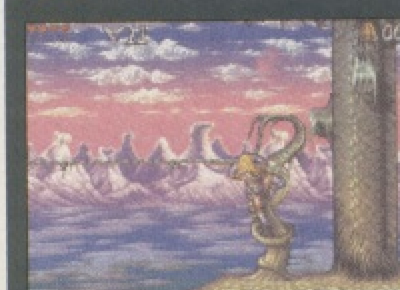
Animation has some very nice touches. This sequence of shots can't hope to show the fluidity of movement, but on screen it really does look impressive.



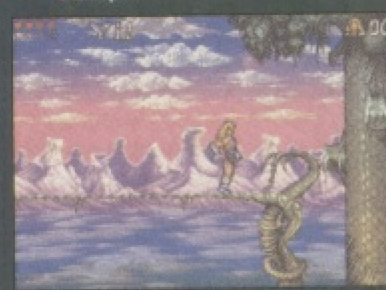
1 'If I can just...'



2 '...I should be able to pull myself onto the rope...'



3 '...get my leg up here...'



4 '..and make the jump onto the tree over there.'

THALION £27.99

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓
A1500 ✗ A2000 ✓ A3000 ✓ A4000 ✗

THALION, 120 ANDERTON PARK RD, MOSELEY BIRMINGHAM, B13 9DQ TEL: 021 328 2762.

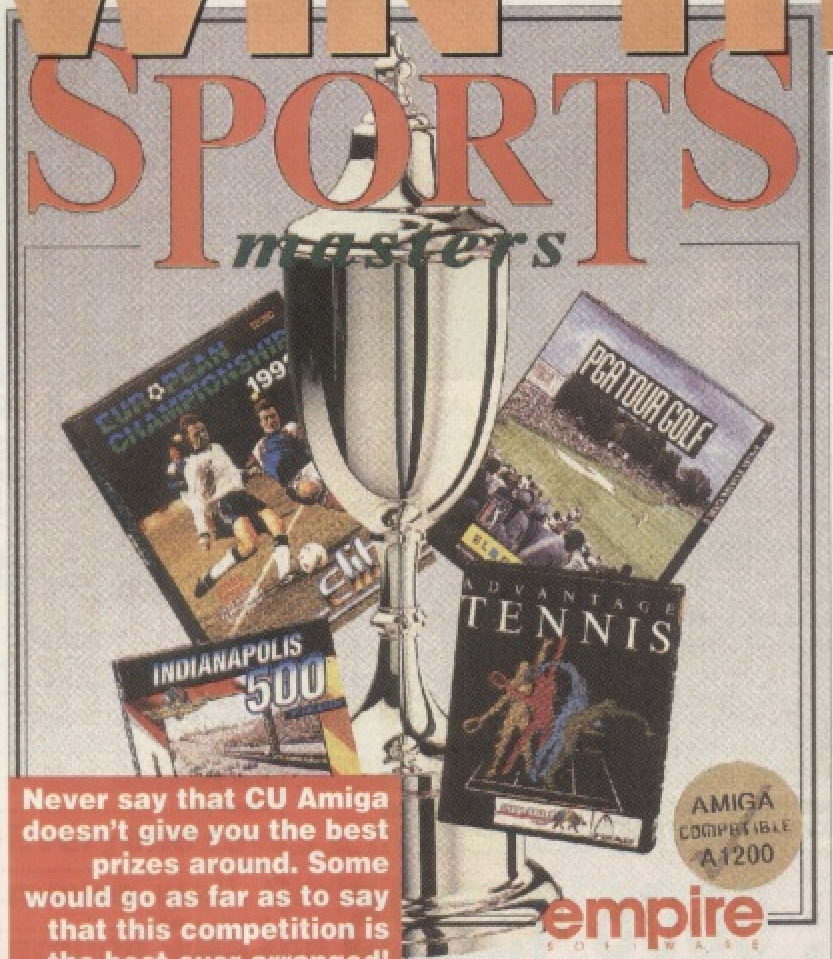
RELEASE DATE:	OUT NOW
GENRE:	ARCADE ADVENTURE
TEAM:	THALION
CONTROLS:	JOYSTICK
NUMBER OF DISKS:	4
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	YES
MEMORY:	1Mb

GRAPHICS	86%
SOUND	74%
LASTABILITY	79%
PLAYABILITY	85%

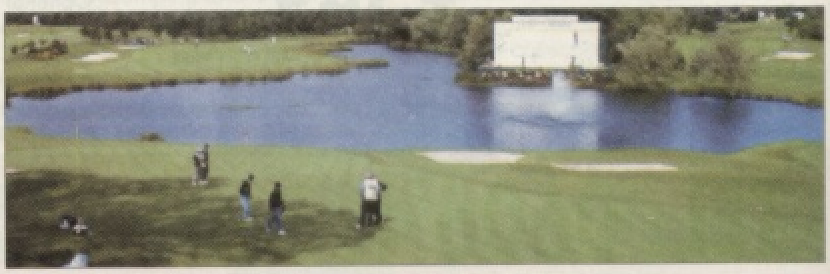
"Good looking, well-animated example of the genre"

OVERALL 84%

WIN THE BEST YOUR







Never say that CU Amiga doesn't give you the best prizes around. Some would go as far as to say that this competition is the best ever arranged! *Sports Masters* is a compilation of some of the best sports games ever, including the classic *PGA Tour Golf*, possibly the best computer golf simulation on any machine, *Advantage Tennis* with its realistic, smooth animation and 3D court movement and the smashing – literally – *Indianapolis 500*, where the race can turn to stock car-style in seconds. If you fancy a pop on the greens, or screaming round bends at high speed, then this is the package for you. Funnily enough, this is also the competition for you. To celebrate this release, CU have teamed up with Empire Software to bring you what has to be one of the greatest competitions ever run in this magazine, with one amazing prize for every game in the box! Here's what you could win:

PGA TOUR GOLF

You might think you're a hot shot on the digital greens and fairways, but how about the chance to really try your luck? Win this prize and you could be swinging your way up and down The Belfry with your own personal coach. Yes, this prize comprises a complete Golf lesson at the famous Belfry course, which will be videotaped for you to hide from your mates later! You too can enjoy the fairways and bunkers of this Par 72 course, home to the famous Johnnie Walker Ryder Cup, and maybe even find a little Ballesteros in your swing! The course has always been regarded as one of England's finest, and since some alteration last summer, it now gets even higher praise. 'The changes are fantastic,' said Ryder Cup team member Colin Montgomerie. Who knows, you might get the chance to agree with him!



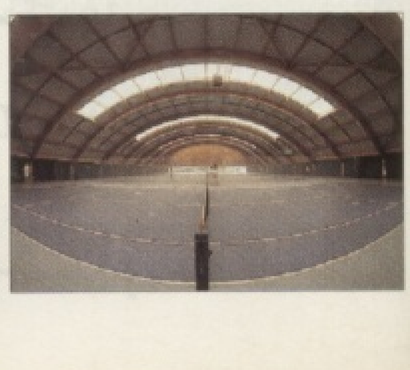
INDIANAPOLIS 500

If a looped, banked track doesn't offer enough excitement, then get your steering wheel round this. The winner of this prize will soon find themselves hurtling around the Brands Hatch 4x4 Off Road Course, the ultimate off road experience! One minute you'll be climbing a steep bank of mud, the next you'll be navigating around tree roots. It's great fun, and very very muddy. It's said that this is the closest a motorist can get to a commando course, do you think you're tough enough for it? The emphasis is on fun and safety, but that isn't to say it won't be exciting. After all, what would you think to driving a Suzuki Samurai four wheel drive over terrain that's impossible to cover by foot? Obviously, to be eligible to win this prize, you must hold a full UK driving license.

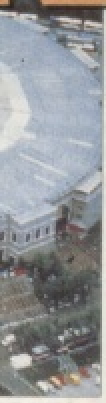


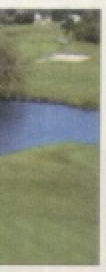
ADVANTAGE TENNIS

Get ready to get tennis elbow and then have it gently soothed as we send the winner of this fantastic prize to the Riverside Racquet Centre, probably the finest tennis and leisure centre in the country. It's so good, in fact, that among its members are top professional tennis players, such as Stefan Edberg, Pat Cash and Jeremy Bates. After receiving a full hour's tennis tuition from one of the many professionals at the centre, the winner and a friend have the rest of the day to enjoy all of the centre's excellent facilities, including grass and cushioned concrete courts, a variety of exercise studios, a six-lane, 25 metre swimming pool and, should you find yourself a little tired at the end of all that, a clubroom to relax in afterwards. What a day out for the lucky winner!



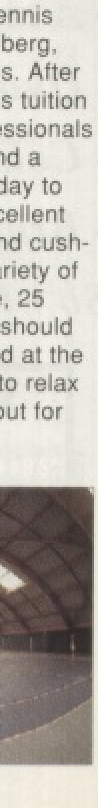
T DAY OF R LIFE!





GE

nis
ave it
we send
prize to
tre,
nd
y. It's so
s mem-
ennis
berg,
s. After
s tuition
essionals
nd a
day to
cellent
nd cush-
riety of
, 25
should
d at the
to relax
out for







EUROPEAN CHAMPIONSHIP 1992

If playing football games puts you in the mood for some real action, then you won't find anywhere better than Wembley Stadium, home to more big games than Toys 'R' Us. Get your name picked out of the bag for this prize, and you – along with your family (a party of two adults and two children) – will receive a ticket for the New Wembley Stadium Tour. This entitles you to a tour behind the scenes. You'll get to see how the Wembley Control centre copes with the thousands of fans, learn about the history of the stadium and even climb the famous steps to the Royal Box and visit the changing rooms.

In addition, if you come close but miss out on the major prizes, there's a chance to get your hands on one of five Runners-up prizes – copies of the brilliant *Sports Masters* compilation.

So, what do you need to do to get your already sweaty mitts on one of these magnificent prizes? Just answer the questions. On this page are four sets of questions – one for each prize. You can enter for all four prizes if you want, but you can only win one. If you don't want to win a particular prize – for example you don't hold a driving license, so don't want the Brands Hatch prize, then leave that set alone.

Once you have completed the competition, stick your personal details in the spaces provided, tear out the slip, stick it in an envelope and post it to us with no delay at 'I Want To Win The Best Day Of My Life', CU Amiga, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. Employees of EMAP Images, Empire Software or any of the clubs and promoters used for prizes are not eligible to enter. The Editor's decision is as final as we let it be. Neither Emap Images nor Empire Software may be held liable for injury or death arising from accidents which occur whilst attending any of the prize venues.



ENTRY FORM

● PGA TOUR GOLF

Question (1) When was the first recorded PGA tournament?

....

Question (2) When were the first profits donated to charity?

....

Question (3) Who was the first American to win the tour?

....

Tie-breaker: The secret of a good swing is ....

....

....

● INDIANAPOLIS 500

Question (1) What is the nickname of the Indianapolis Speedway?

....

Question (2) In which decade was the Indianapolis 500 part of the Grand Prix World Championship?

....

Question (3) What does the '500' mean?

....

Tie-breaker: I love to rev my engine because ....

....

....

● ADVANTAGE TENNIS

Question (1) Who was the first British woman to win at Wimbledon?

....

Question (2) Who was the oldest male player in last year's final?

....

Question (3) How much should a tennis ball weigh?

....

Tie-breaker: The nice thing about lobbing is ....

....

....

● EUROPEAN CHAMPIONSHIP 1992

Question (1) How many F.A.Cup matches have been held at Wembley?

....

Question (2) What is the seating capacity of Wembley Stadium?

....

Question (3) Name the major musical charity event of the 80s, held at Wembley?

....

Tie-breaker: Dan Slingsby should be in the England squad because ....

....

....

Name: ....

Address: ....

....

....

Daytime Telephone Number: ....

Please number the boxes below in order of preference, i.e. if your first choice prize is a golf lesson put a 1 in the box next to PGA Tour Golf, etc.

- ❑ **PGA Tour Golf**
- ❑ **Indianapolis 500** (Requires full UK Driving License)
- ❑ **Advantage Tennis**
- ❑ **European Championship 1992**


STARRING
HORROR
OFFICIAL
UNIVERSAL MONSTERS
TM
Professor Van Helsing is dead. The containment ritual has failed. You, alone, are left to face six of the most fearsome monsters that ever existed, dozens of their hideous minions and a haunted mansion. You must obtain a specific object from each creature and locate the six missing pieces of the Bloodstar Amulet.
If you ever get as far as discovering the hidden Star Chamber then you will confront the monsters in a final battle. There are underwater caverns, secret rooms, razor-sharp pendulums, snakes, pits of vicious spikes and locked doors you may not want to open.
Your chances are slim!
TERROR
ocean
YOU WILL NEVER PLAY THE SAME AGAIN!!!!
ON YOUR ATARI ST & CBM AMIGA
THE BRIDE OF FRANKENSTEIN © 1935 UNIVERSAL PICTURES CORPORATION. Renewed 1962 by UNIVERSAL PICTURES COMPANY, INC. All rights reserved. Licensed by MCA/Universal Merchandising, Inc.
THE CREATURE FROM THE BLACK LAGOON © 1954 UNIVERSAL PICTURES COMPANY, INC. Renewed 1982 by UNIVERSAL CITY STUDIOS, INC. All rights reserved. Licensed by MCA/Universal Merchandising, Inc.
DRACULA © 1931 UNIVERSAL PICTURES CORPORATION. Renewed 1958 by UNIVERSAL PICTURES COMPANY, INC. All rights reserved. Licensed by MCA/Universal Merchandising, Inc.
FRANKENSTEIN © 1931 UNIVERSAL PICTURES CORPORATION. Renewed 1959 by UNIVERSAL PICTURES COMPANY, INC. All rights reserved. Licensed by MCA/Universal Merchandising, Inc.
THE MUMMY © 1932 UNIVERSAL PICTURES CORPORATION. Renewed 1960 by UNIVERSAL PICTURES COMPANY, INC. All rights reserved. Licensed by MCA/Universal Merchandising, Inc.
THE WOLF MAN ® & © 1941 UNIVERSAL PICTURES COMPANY, INC. Renewed 1969 by UNIVERSAL PICTURES. All rights reserved. Licensed by MCA/Universal Merchandising, Inc.
OCEAN SOFTWARE LIMITED · 2 CASTLE STREET · CASTLEFIELD · MANCHESTER · M3 4LZ · TEL: 061 832 6633 · FAX: 061 834 0650

From the moment you boot up you know that *AP2* is going to be something special.



ABANDONED PLACES 2

Tony Gill likes creeping around in the dark, mixing with all manner of social misfits – which makes him the ideal person to take a look at Ice's latest RPG stormer.

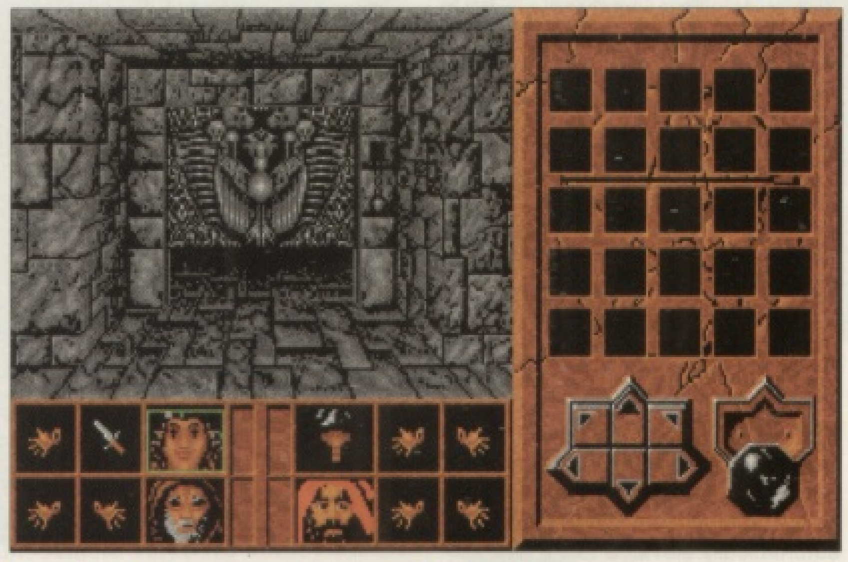
Abandoned Places could have been a great success, but the collapse of its distributor, Electronic Zoo, meant that many games players never got their hands on it. Fortunately for RPG fans everywhere, the sequel has just been released by ICE and looks set to be the smash that its big brother never managed to be.

Originality certainly isn't this game's strong point. If you're familiar with the likes of *Eye of the Beholder* or *Black Crypt* then you'll feel quite at home in its dank passageways. The gameplay is almost identical to others of this ilk. Four hundred years after the events that formed the original game, you are once again called upon to save the kingdom of Kalynthia from impending doom, by killing Pendugmalhe, the creator of the evil Bronagh.

All of the main ingredients of an RPG have been incorporated into this game. From a list of 32 heroes you select a team of four aspiring champions to battle your way through 35 levels of monsters and puzzles. Fighters, Wizards and Clerics stand ready to take up the armour and weaponry strewn throughout the game.

SOUND ADVICE

There are some atmospheric snatches of music, plus some interesting sound effects. However, there are one or two instances where I could have done without some of them. One sound which you'll have to learn to love is the mad clip-clopping of your heart. This incessant tap-dance reaches a crescendo whenever there are monsters nearby – some kind of Middle Earth radar, I suppose. After a while I found it a little too intrusive and found myself reaching for the volume knob.



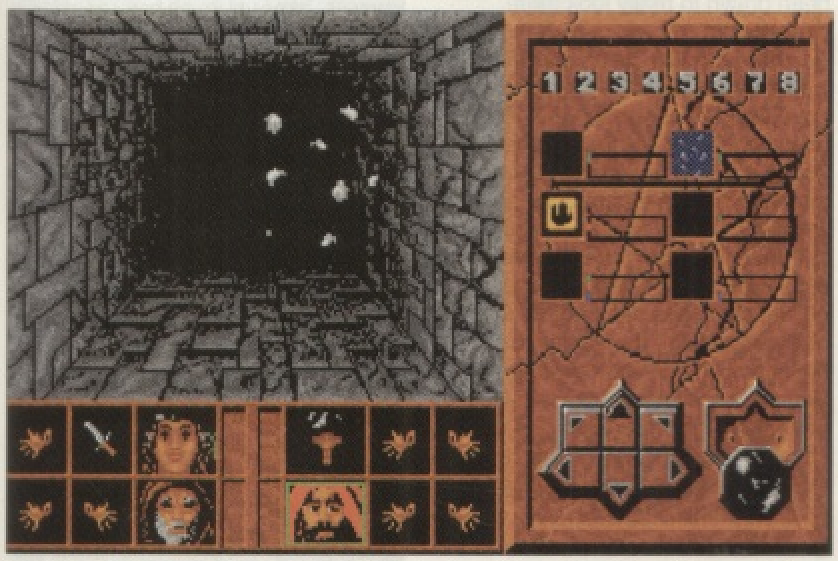
Unlike the death-dealing doors in *Dungeon Master* you can't pummel your enemies to pieces with this, but at least it looks a good deal better.

OUT OF CONTROL

The game has many alternative movement controls, but some of them appear to be a little on the sluggish side. Let's face it, when you have a demon treading close behind, you want to be absolutely sure that you're going to move when you press that key! Another problem with the controls is that they can be a little confusing – for example, you have to press the right mouse button to operate a hand weapon, but you need the left button for a magic spell. In the heat of battle that little touch can cost you a thick lip!

DARK SECRETS

Most RPGs tend to confine themselves to dark dungeons where you ➢



The meteor storm spell lets you send a hail of rocks down the corridor to knock lumps out of your enemies.

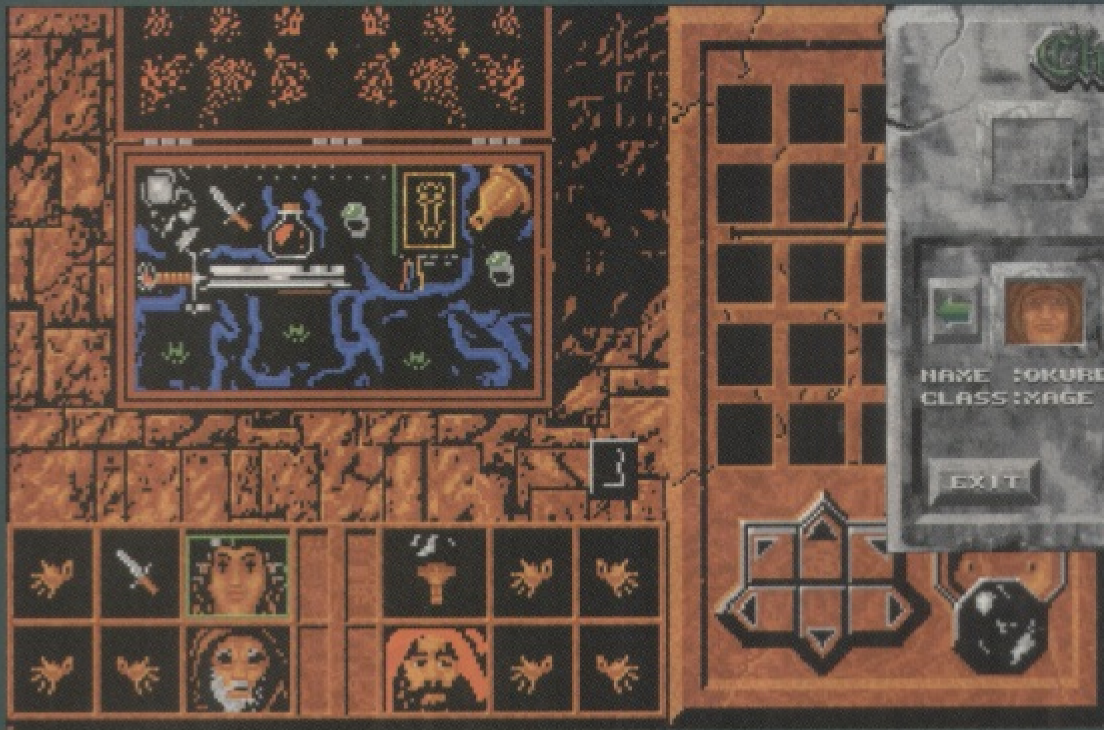
THEY GOT RHYTHM

Role-players have evolved many different monster-bashing techniques for games such as this, and perhaps the most successful strategy is the Purple Worm Two-Step.

This folk dance was developed in the lower levels of *Dungeon Master*, and was used to dispatch the ravenous worms which made mincemeat out of apprentice heroes. First you should find a large open area where you are in no danger of getting yourself boxed in and then get the monster to follow you while you hit and move.

As the monster moves into position facing you, it will pause for a moment. Quickly move sideways and then turn to face the square that you have just left. The monster will follow you into that square and for a moment will be facing sideways on to you.

Hit the beast as it pauses to turn and face you. Again move sideways and turn. If you keep your cool and maintain this rhythm you will be able to batter the beast with impunity. This technique must be used in *Abandoned Places 2* if you want to survive the terrors of the hallways.

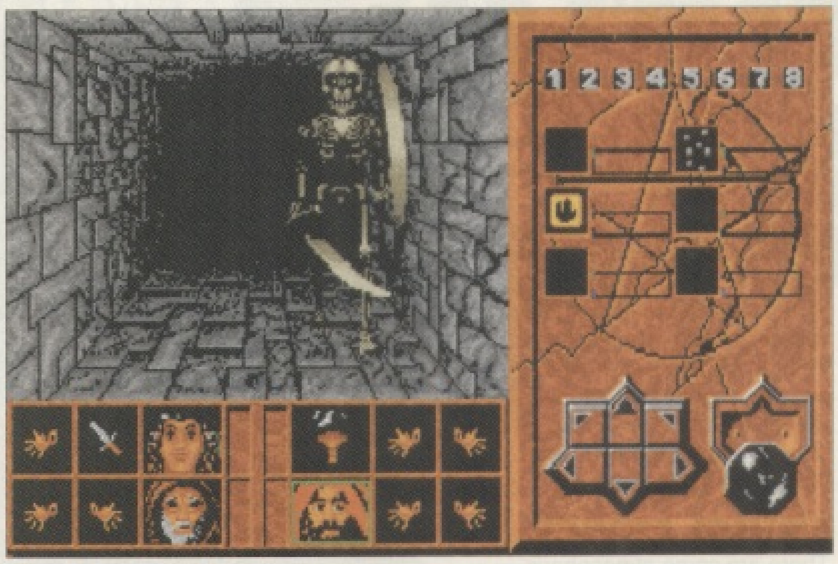


Scattered around the dungeons you'll find treasure chests full of food and weaponry.



The first thing to do before you can start your quest is to generate a party of adventurers. It's from this screen that you get to choose your characters, name them, and decide on their abilities. It's important to choose carefully and get a balanced party, otherwise you could come a cropper later.

Right: The monsters have more of a 3D feel to them than any other RPG I've seen. This skeleton moves very fluidly as he storms forward.



can suspend your disbelief more easily. However, *Abandoned Places 2* requires you to leave your dungeon and travel overland through field and forest before you once again plunge into the gloom. During your sojourn in the open air you will be molested by bears and trolls that are just as vicious as anything you will find underground, so don't think things get any easier in the sunshine.

RAISING THE STAKES

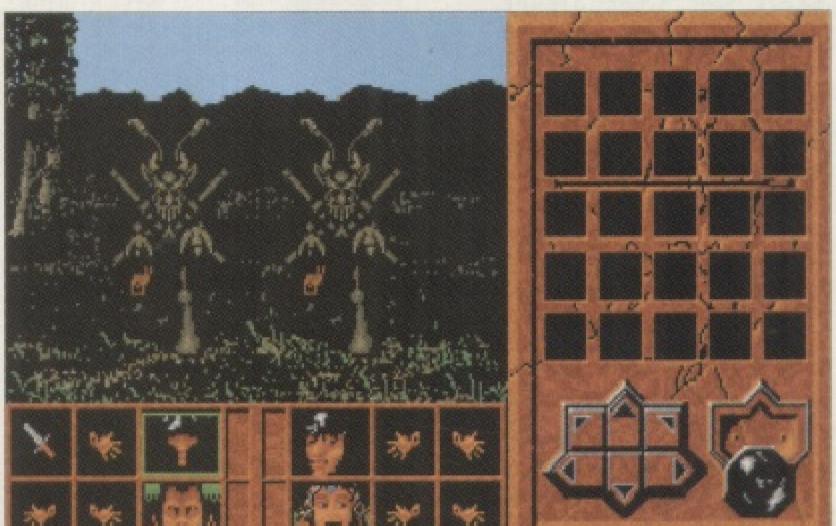
As your heroes progress, their experience points mount up until they are automatically elevated to the next rank of warrior or mage. New spells magically appear for both your wizards and your clerics, while your weapon handlers start hitting things with more effect.

Don't be fooled into thinking that the early levels of this game will break you in gently. There are a few places at the beginning of the game where you can step on an invisible pressure pad and find that you have just released an army of skeletons that position themselves between you and the exit. However, for those of you who like the easy life, this is made up for by the fact that, unlike many RPGs, disk swapping is kept to a minimum.

CLASS ACT

From the very start you know that you are in for a treat with this game. Apart from some awkward controls, everything else appears to be top-line. The half-brite graphics are first-class and the monsters have been drawn to really look three dimensional.

There are few concessions in *Abandoned Places 2* – the writers have taken it for granted that you have been here before and that you're ready to plunge into the maelstrom from the moment the starting whistle is blown. Things start tough and then they get even tougher. The whole point of this game is to build on what we have seen before instead of simply playing the same old game again but with different graphics. When I found I was cursing myself for making the wrong decision during combat because of the panic, I realised that there must be something worth playing here.



There is more to this game than gloomy dungeon corridors. A walk in the sunshine makes a nice break, but beware of the forests.

ACTION RPGS

There have been a number of fast-action role-playing games which have made it big on the Amiga. *Dungeon Master, Chaos Strikes Back, Bloodwych, Eye of the Beholder I* and *II, Captive, Black Crypt* and *Knightmare* were all very successful. These games took monster-thrashing away from the sedate world of dice rolls and added real-time combat. There is no time in these games to formulate a battle plan; combat begins the instant a claw rakes your front rank. Real-time action has done for role-playing games what the likes of *Monkey Island* did for text adventures. Both formats have been dragged onto centre stage where the mainstream player has picked them up and carried them to the number one spot on the software charts. Instead of resenting this intrusion into their private world, role-players should welcome the enthusiasm and effort which now goes into producing ever more exciting games and acknowledges the magic and fun to be had in the worlds of fantasy and science fiction.

ICE £34.99

A500 ✓	A500+ ✓	A600 ✓	A1200 ✓
A1500 ✓	A2000 ✓	A3000 ✓	A4000 ✓

ICE LTD, BRIDGE HOUSE, MERRYWALKS, STROUD, GLOS GL5 1QA. TEL: 0453 756993

RELEASE DATE:	OUT NOW
GENRE:	RPG
TEAM:	IN HOUSE
CONTROLS:	MOUSE & KEYBOARD
NUMBER OF DISKS:	5
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	YES
MEMORY:	1mb

GRAPHICS	91%
SOUND	82%
LASTABILITY	90%
PLAYABILITY	83%

'At long last comes another RPG to set your pulse racing'

OVERALL 87%

Two good reasons to put the flags out.

Star has built its reputation on building top quality, feature packed printers at prices everyone can afford. And the two new dot matrix printers offer the best value ever.

The LC-100 colour is the UK's lowest cost colour printer. It offers the best of both worlds: mono and colour printing for work or play.



The LC24-100 gives unbeatable value for money for Letter Quality printing. 10 LQ fonts, fast printing and Compressed Data Mode (for rapid transmission of Windows based data) are all standard.

In fact, with so many features at such unbeatable prices, the only flag the competition will be waving is a white one.

Flag down an LC-100 or LC24-100 now. Contact Star on 0494 471111, or complete the coupon.

star MICRONICS

A division of Star Micronics Co. Ltd., Japan

Star Micronics U.K. Ltd., Star House, Peregrine Business Park, High Wycombe, Buckinghamshire HP13 7DL. Tel: (0494) 471111. Fax: (0494) 473333.

Please unfurl me some information on the LC-100 printers.

Name____________________

Company____________________

Address____________________

Postcode__________ Tel:__________

HMSO

HMSO preferred.
For information, ring 0603 695250.

Specifications:
LC-100: 9-pin, 180 cps draft/45 NLQ • 8 NLQ fonts • Auto emulation selection • Electronic dip switches

LC24-100: 24-pin, 192 cps draft/64 LQ • 10 Letter Quality fonts • 16 Kbyte buffer • Paper parking • Electronic dip switches • compressed data mode.

SOFTWARE SUPREME

139 High Road,
Loughton,
Essex
IG10 4LT
Tel: 081 365 0344 (All lines)
Fax: 081 365 1650

OPEN
6 DAYS
10 - 6

24 HOUR ORDERING SERVICE ● PHONE FOR FREE CATALOGUE ●

OUR PRICES ARE SUBJECT TO CHANGE , PLEASE CONFIRM AT TIME OF ORDERING.

Title	Price
3D Construction Kit 2	35.49
4D Sports Driving	11.49
4D Sports Boxing	11.49
ADI English (11-12 12-13)	16.99
ADI English (13-14 14-15)	16.99
ADI French (11-12 12-13)	16.99
ADI French (13-14 14-15)	16.99
ADI Junior Reading (4-5) (6-7)	16.99
ADI Junior Counting (4-5) (6-7)	16.99
ADI Maths (11-12 12-13)	16.99
ADI Maths (13-14 14-15)	16.99
Alien Breed Special Edition	10.99
A Train	25.99
Action 5	17.99
Addams Family	16.49
Air Combat Aces	18.99
Air Support	16.49
Air Warrior	23.49
Alcatraz	16.49
Alpha Waves	16.99
Another World	16.99
Alien 3	19.49
Animation Studio	55.99
Air Bucks	16.49
Aquatic Games	16.99
Aquaventurer	16.49
Armour Geddon	14.99
Armour Geddon 2	19.49
Apidya	16.49
Arsenal FC	16.99
Ashes of Empire	17.49
Assasin	16.99
Asterix	16.49
Archer Macleans Pool	16.99
A.T.A.C.	23.49
AV 8B Harrier Assault	24.49
A320 Airbus	26.49
B17 Flying Fortress	21.99
Back to the Future 3	11.49
Bane of the Cosmic Forge	23.49
Barbarian 2	14.49
B.A.T. 2	22.49
Battle Chess 2	16.99
Battle Command	13.99
Battle Isle	18.99
Battle Isle Data Disc	13.49
Better Maths	15.99
Better Spelling	15.99
Big Run	16.49
Bills Tomato Game	20.99
Birds of Prey	23.49
Black Crypt	16.49
Blue Max	18.49
Blues Bros.	15.99
Body Blows	18.99
Bonanza Bros.	16.49
Battle Toads	16.49
California Games 2	16.49
Campaigne	23.49
Captive	15.99
Carl Lewis Challenge	15.99
Castles	16.49
Castle of Dr.Brain	17.49
Catch 'Em	16.49
Centurion	16.49
Championship Manager	16.49
Chaos Engine	17.99
Chuck Rock	9.99
Cisco Heat	6.99
Celtic Legends	18.49
Convert Action	23.49
Crazy Cars 3	16.49
Cruise for a Corpse	17.49
Crystal Kingdom Dizzy	14.99
Cool Croc Twins	16.99
Contraption	15.99
Cool World	16.99
Curse of the Enchantia	23.49
Civilization	23.49
Creatures 2	16.49
Daily Double Horse Racing	8.99
Dark Queen of Krynn	22.49
Das Boot	10.99
Daughters of Serpents	18.99
Devious Designs	11.99
D Generation	11.99
Demonsgate	22.49
Deluxe Paint 4	58.49
Double Dragon 3	16.49
Double Hit 1	8.99
Double Hit 2	8.99
Double Hit 3	8.99
Dune	19.99
Dungeon Master/Chaos Strikes Back	19.49
Dyna Blaster	19.49
Elf	16.49
Elite 2	23.99
Elvira Mistress of the Dark	21.99
Elvira 2 - Cerberus	22.49
Elvira the Arcade	16.99
Epic	19.49
European Championship '92	16.99
European Football Champ	16.99
Eye of the Beholder	19.49
Eye of the Beholder 2	22.49
Espania Games 92	19.99
Falcon	10.99
Fantastic Worlds	24.99
F14 Tom Cat	18.99
F15 Strike Eagle 2	22.49
F17 Stealth Fighter	21.49
F19 Stealth Fighter	19.49
F29 Retaliator	15.99
Falcon 3	23.99
Fantastic Voyage	16.99
Final Fight	16.49
Fire & Ice	15.99
Fire Force	16.99
First Samurai	16.49
Flight of the Intruder	10.99
Floor 13	19.99
Football Crazy	14.99
Fuzzball	13.99
Formula 1 Grand Prix	22.99
Fascination	18.99
Fort Apache	15.49
Fun School 3 (under 5)	16.99
Fun School 3 (5-7)	16.99
Fun School 3 (7+)	16.99
Fun School 4 (under 5)	16.99
Fun School 4 (5-7)	16.99
Fun School 4 (7+)	16.99
Fun School -Paint & Create	16.99
Fun School -Spelling Fair	16.99
Gateway to Sav/Frontier	18.49
G.Loc R360	16.49
Gauntlet 3	11.99
Global Effect	16.99
Gods	15.49
Golden Shot	16.99
Graham Gooch Cricket	20.99
Graham Taylor	16.49
Gunship 2000	21.99
Goblins	16.99
Hard Drivin' 2	12.99
Harlequin	16.49
Harpoon 1 meg	18.99
Heimdall	23.49
Head to Head	23.99
Heros Quest	16.99
History Line	23.99
Home Alone	16.99
Hook	15.99
Hostile Breed	16.49
Humans	17.99
Humans Datadisk	14.99
Humans Stand Alone	20.99
Ian Bothams Cricket	19.49
Indy Heat	16.99
Indy Action	16.99
Indy Adv	26.99
Ishar Legend Fortress	20.49
I Jones Fate of Atlantis	24.99
Jaguar XJ220	16.49
Jimmy Whites Snooker	16.99
John Barnes	15.99
J.Madden Football	16.49
Jim Power	16.99
Junior Typist	11.99
Kid Gloves 2	16.49
Kings Quest V	19.99
Knightmare	18.99
Knight of the Sky	21.49
Killing Game Show	8.99
Last Ninja 3	16.49
Lazer Squad 2	16.99
Leander	15.99
Legend	18.49
Lawnmower Man	16.99
Leathal Weapon 3	16.49
Legend of Kyrandia	20.99
Legend of Valour	24.49
Lemmings	15.99
Lemmings 2	20.99
Lemmings Data Disc	13.49
Lemmings Double Pack	19.99
Lemmings Stand Alone	15.99
Life & Death 2	16.49
Links H.D.	23.99
Links Course - Bountiful	13.99
Links Course - Firestone	13.99
Links Course - Pinehurst	13.99
Liverpool	17.49
Lotus Turbo Challenge 2	16.49
Lotus Turbo Challenge 3	16.99
Lure of the Temptress	19.99
McDonalds Land	17.99
M.1 Tank Platoon	19.99
Magic Pockets	15.99
Man.Utd Europe	15.99
Match of the Day	17.49
Mavis Beacon	19.99
Megamix	20.99
Megalomnia First Samarial	20.49
Megasports	16.99
Megatwins	16.49
Merlin's Maths	16.99
Microprose Golf	23.49
Midwinter 2	23.49
Mig 29 Super Fulcrum	24.99
Might & Magic 3	22.99
Mini Office	40.99
Moonstone	19.49
Monkey Island	15.99
Monkey Island 2	22.49
Movie Mix	12.99
Myth	18.49
Mega Fortress	17.49
Narc	7.99
N.Mansells World Champ	19.99
Nick Faldo's Golf	23.99
No Greater Glory	23.99
Noddy's Playtime	16.99
Omar Shariffs Bridge	23.49
Outrun Europa	16.49
Outlander	19.49
Orbitus	12.99
Ork	15.99
Psychos Soccer Sel	21.99
Palladin 2	19.49
Paper Boy 2	8.49
Parasel Stars	15.99
Pegasus	16.49
Perfect General	22.49
PGA Golf Tour +	19.99
PGA Course Discs	10.99
Pinball Dreams	15.99
Pinball Fantasies	17.99
Pitfighter	8.49
Plotting	15.49
Populus 2	19.49
Premiere	20.99
Premier Manager	16.99
Prince of Persia	15.99
Prophecy of the Shadow	21.99
Pro Tennis Tour 2	15.99
Project X	16.49
Push Over	15.99
Plan 9 Outer Space	20.99
Pools of Darkness	18.49
Powermonger	17.99
Populus/Sim City	16.99
Quest for Glory	20.99
Ragnonok	26.99
Raving Mad	18.49
Race Drivin'	11.49
Railroad Tycoon	22.49
RBI 2 Baseball	12.99
Realms	19.99
Red Zone	15.99
Risky Woods	16.99
Road Rash	16.99
Robin Hood	15.99
Robocod	15.99
Robocop 2	7.99
Robocop 3	15.99
Robosports	16.49
Rome AD 92	20.99
Rookies	17.49
R Type 2	14.99
Rugby World Cup	8.99
Rules of Engagement	16.99
Reach for the Skies	19.49
Sabre Team	16.99
Scrabble Deluxe	20.99
Secret of the Silver Blades	21.99
Sensible Soccer	16.49
Shadowlands	19.49
Shuttle the Sim	20.49
Shadow of the Beast 3	19.49
Silent Service 2	18.99
Sim Ant	22.99
Sim City Deluxe	24.99
Sim Earth	20.99
Simpsons	15.99
Silly Putty	16.99
Sleepwalker	20.99
Smash TV	15.99
Space Ace 2	32.49
Space Gun	15.99
Space Crusade	16.99
Space Quest 1	16.99
Special Forces	22.49
Spirit of Excalibur	9.99
Sports Mix	12.99
Steel Empire	19.99
Stereo Master	26.49
Storm Master	16.99
Streetfighter 2	17.99
Strike Fleet	16.99
Striker	16.99
Super Tetris	15.99
Super Ski 2	11.99
Super Cars	15.99
Sword of Honour	16.49
Silly Putty	16.49
Their Finest Hour	19.49
The Manager	20.99
ThunderHawk	20.99
Thunder Jaws	16.49
Tipp Off	16.99
Tennis Cup 2	16.99
Terminator 2	16.99
The Godfather	12.49
T.V. Sports Baseball	16.99
Transarctica	18.99
Treasure of Sav.Frontier	22.49
The Oath	16.49
Universal Monsters	16.99
Ultima Under World	20.99
Ultima V	19.99
Ultima VI	20.49
Ultima VII	20.99
UMS 2	23.49
UMS Planet Editor	20.99
Under Pressure	17.49
Uridium 2	17.49
UGH	15.49
Vengence of Excalibur	12.99
Video Kid	15.99
Vroom	15.49
Ween	20.99
Winter Sports	17.49
Wind in the Willows	15.99
Wiz Kid	15.99
Wolf Child	16.99
Wolf Pack	11.49
WWF	15.99
WWF 2	15.99
Wing Commander 1	22.99
Willy Beamish	19.99
Zool	16.49

COMPILATIONS

Title	Price
Action 5	17.99
Award Winners	16.99
Air Combat Aces	18.99
Action Pack	15.99
Air Land and Sea	23.99
Big Box 1	15.99
Big Box 2	19.49
Bitmap Bros. Vol 1	16.99
Bitmap Bros. Vol 2	16.99
Board Genius	17.99
Dream Team	17.99
Fantastic Worlds	24.99
Football Crazy	14.99
2 Hot 2 Handle	18.99
Magnetic Scrolls	15.99
Ninja Collection	13.99
Power Up	16.99
Power Pack	14.99
Rainbow Collection	13.99
Soccer Mania	11.99
Super Fighter	17.99
Super Sim Pack	21.99
Super Sega	20.99
Super Heroes	17.99
Sports Best	20.99
Test Drive 2 Collection	20.99
The Greatest Hits	23.99
Quest for Adventure	23.99

BUDGET TITLES

Title	Price
3D Pool	6.99
Adrenalynn	6.99
Altered Beast	6.99
Arkanoid	4.50
Arkanoid 2	6.99
Atomino	8.49
Awesome	8.99
Bubble Bobble	6.99
Baal	5.99
Bards Tale 3	8,49
Batman The Movie	6.99
Beach Volley	6.99
Blood Money	6.99
California Games	6.99
Carrier Command	6.99
Celtica GT4 Rally	6.99
Centrefold Squares	6.99
Chase HQ	7.99
Chess Champ 2175	8.99
Cloud Kingdom	6.99
Colossus Chess	6.99
Conflict in Europe	7.99
Crazy Cars	6.99
CJ in the USA	6.99
Defender of the Crown	7.99
Deluxe Strip Poker	6.99
Double Dragon 1 or 2	6.99
Ed The Duck	6.93
Emlyn Hughes Soccer	6.99
F16 Combat Pilot	6.99
Fantasy World Dizzy	5.99
Final Count Down	6.99
Fun School 2 (Under 5)	6.99
Fun School 2 (5-7)	6.99
Fun School 2 (7+)	6.99
Gauntlet 2	6.99
Gem X	6.99
Ghouls 'n' Ghosts	6.99
Ghostbusters 2	6.99
Golden Axe	6.99
Hard Drivin'	6.99
Head over Heels	6.99
James Pond	6.99
Jet Set Willy	7.99
John Lowe Ultimate Darts	6.99
Kid Gloves	5.99
Licenced to Kill	5.99
Lombard RAC Rally	6.99
Lotus Esprit	6.99
Manchester United	6.99
Manic Minor	7.99
Micheal Jackson Moonwalker	6.99
Midnight Resistance	6.99
Mig 29 Soviet Fighter	6.99
Moonshine Races	6.99
New Zealand Story	6.99
Operation Thunderbolt	6.99
Operation Wolf	6.99
Outrun	6.99
Pang	6.99
Panza Kick Boxing	6.99
Pipe Mania	6.99
Pitfighter	6.99
Platoon	5.99
P P Hammer	6.99
Predator	6.99
Pro Tennis Tour	6.99
Puzznic	6.99
Rainbow Islands	6.99
Rocket Ranger	8.49
Robocop	6.99
Rolling Ronny	9.99
R-Type	6.99
Run the Gauntlet	6.99
Shadow Warrior	6.99
Sky or Die	8.99
Starglider 2	6.99
Steve Davis Snooker	6.99
Superplex	6.99
Super Off Road	9.99
Shinobi	6.99
Shuttle Puck Cafe	6.99
Strike Force Harrier	6.99
Stunt Car Racer	6.99
Sleeping Godslie	6.99
Wiz Ball	6.99
Xenon II	7.99

Please make cheques & PO's payable to
Software Supreme
P & P £1 per item UK. Elsewhere £3 per item.
New titles sent as released and subject to price reviews

Title ---------------------------------Price-------------------------------

P&P-----------------------------
Computer_____________________Total-------------------------------

Name --
Address--------------------------------------

Tel ---
Card No. ....
Expiry Date [/]
Ac [ ] Visa [ ] Ch [ ] PO [ ]

SOFTWARE SUPREME
139 High Road, Loughton,
Essex IG10 4LT
24hr Ordering Service
081 - 365 0344 (All lines)
24hr FAX *081 - 365 1650*

CU



The modern flight simulation can't be without its external views and CAP is no exception. You can position the camera wherever you like offering an infinite amount of shots.



Most of the time you'll be concentrating on the main flight screen where the HUD provides all the necessary information.

CU AMIGA SCREENSTAR

COMBAT AIR PATROL

Tyrants, dictators, male chauvinist pigs – is no-one safe from John Mather and his magnificent flying machine?

A number of recent Amiga flight sims have taken their inspiration from real combat situations. *Flight Of The Intruder* centred around the Vietnam War, *Reach For The Skies* had us participating in the Battle Of Britain and *Harrier*... well, there are some exceptions, but I think you know where I'm coming from [*I know where you're going – Ed.*].

It comes as no surprise, then, to learn that *Combat Air Patrol* is based on the Gulf war when we really taught Saddam Hussein not to mess with us Westerners. Except we didn't because, although we succeeded in liberating Kuwait, the tyrant is still in power and ruling his people with a ruthless hand. Well, now's your chance to rewrite the history books and drive Mr Hussein out of power with a crafty combination of military planning and flying skills – all in the privacy of your own home!

ACT RESPONSIBLY

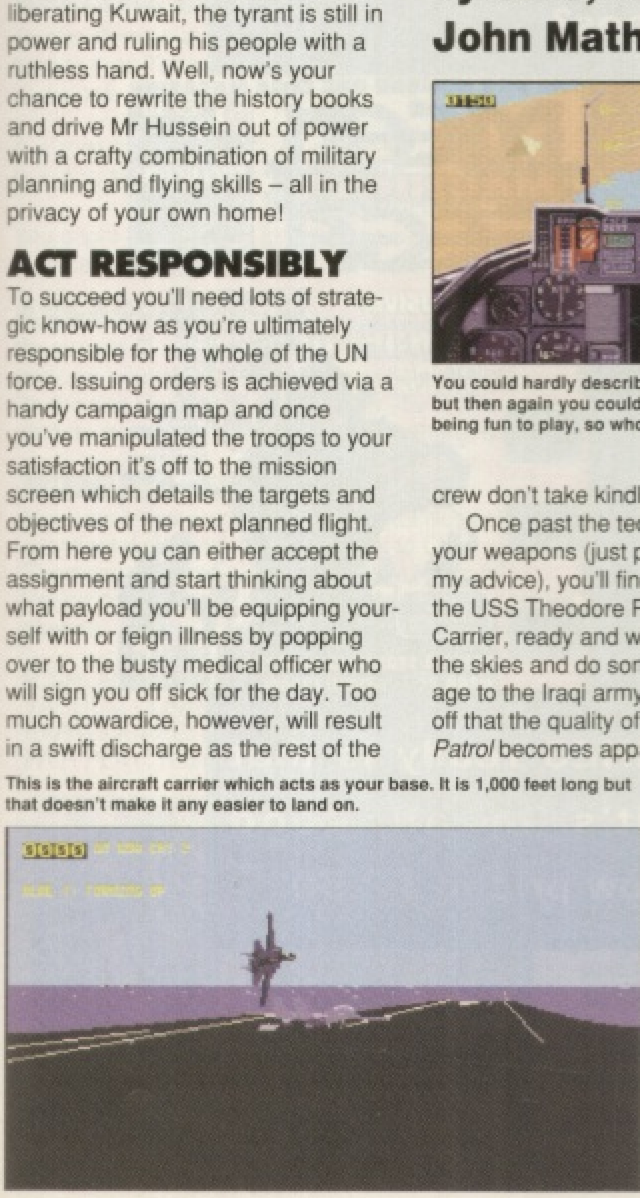
To succeed you'll need lots of strategic know-how as you're ultimately responsible for the whole of the UN force. Issuing orders is achieved via a handy campaign map and once you've manipulated the troops to your satisfaction it's off to the mission screen which details the targets and objectives of the next planned flight. From here you can either accept the assignment and start thinking about what payload you'll be equipping yourself with or feign illness by popping over to the busty medical officer who will sign you off sick for the day. Too much cowardice, however, will result in a swift discharge as the rest of the crew don't take kindly to malingerers.



You could hardly describe the landscape as impressive, but then again you could hardly describe the game as not being fun to play, so who cares?

Once past the tedium of selecting your weapons (just press 'default', is my advice), you'll find yourself aboard the USS Theodore Roosevelt Aircraft Carrier, ready and waiting to take to the skies and do some serious damage to the Iraqi army. It's as you take off that the quality of *Combat Air Patrol* becomes apparent - this has to be the fastest, slickest flight simulator available on the Amiga. In many flight sims you find a time lag between joystick and actual response on screen – not so in *CAP*! Here the effects of your decisions are depicted almost instantaneously. And whereas looking sideways or behind would usually involve the screen blanking and 'cutting' to a separate view, you can scroll the cockpit around by pressing the keypad, meaning it's possible to quickly glance to one side and back again with some realism. You can also do an Exorcist-style 360 degree head turn, which is always something to impress your friends with. Probably.

This is the aircraft carrier which acts as your base. It is 1,000 feet long but that doesn't make it any easier to land on.



FLY-BOY

The plane itself is a joy to fly. There's hardly any messing around, the keys are sensibly chosen and with the choice of either mouse, joystick or keys, every prospective pilot will find a method which suits them. The controls aren't as complex as in most simulations and the necessary keypresses soon become second nature.

The actual landscape is fairly empty but the game more than makes up for this in the playability stakes. The 3D routines are also suitably speedy and everything, from the other aircraft to the ships, whizzes by at an amazing pace. The general chaotic war atmosphere is further enhanced by the sampled sound effects which tell of any damage and give other valuable information.

Overall, it's hard to find fault with *Combat Air Patrol*. It's fast, thrilling, and – more importantly – fun to play. It may come as quite a shock to gamers who take their flight simulations seriously, as the action is far more immediate but, for me at least, this approach serves to make it far more accessible.

It's been a long time since we had anything near a decent flight sim for the Amiga. Psygnosis really have put the 'flight' back into simulation. *CAP* will have you swallowing air-sickness tablets by the bucket full.

PSYGNOSIS £29.99

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓
A1500 ✓ A2000 ✓ A3000 ✓ A4000 ✓

PSYGNOSIS, SOUTH HARRINGTON BUILDING, SEFTON STREET, LIVERPOOL L3 4BQ. TEL: 051 709 5755

RELEASE DATE:	MID APRIL
GENRE:	FLIGHT SIMULATION
TEAM:	IN HOUSE
CONTROLS:	M/K/J
NUMBER OF DISKS:	2
NUMBER OF PLAYERS:	1
HARD DISK INSTALLABLE:	YES
MEMORY:	1Mb

GRAPHICS	88%
SOUND	74%
LASTABILITY	89%
PLAYABILITY	90%

"If you're into flight sims then buy this; if you're not, buy it anyway"

OVERALL 88%

MEAN MACHINES IS REALLY GREAT

And that's our totally unbiased opinion



Well, alright, maybe we are a teeny bit influenced, but let's face it, what other mag gives you such hot news, such stunning previews and as many fantastic in-depth reviews of the latest games as MEAN MACHINE SEGA does?







MEAN MACHINES really is that good and it's in all good newsagents now priced £2.50

SMALL TiPS

Can't zap that alien quick enough? Fed up banging your head against the wall in frustration? Here's CU's very own headbanger, Tony Dillon, with tips so hot, you could dry roast your grandmother on them.



ALIEN BREED – THE SPECIAL EDITION

To skip through the levels of this superb alien basher from Team 17, type the following key sequence.

Q A Z W S X E D C R F V T G B Y H N U J I K O L
Q A Z W S X E D C R F V T G B Y

You might find it easier to press the keys in groups of three, e.g. QAZ, WSX, etc.

ASSASSIN

No-one could say that Team 17's platform caper is easy, so here's a whole plethora of helping hints. On the first level, go to the first tree you find and climb to the top, left corner of it. Once there, type in NICEVIEWFROMUPHEREMATE (no spaces) and the screen's border will flash a couple of times. Press P to unapuse the game, now the following keys can be used to make the game that little bit easier:

1-6: Go to the selected level (with unlimited energy).
W: Gives you the maximum weapon configuration.
E: Takes you straight to the end-of-level Guardian.
C: Grants infinite continues.

PINBALL FANTASIES

Here are a few more codes for Digital Illusion's excellent pinball simulation, thanks to Colin Thomson of Simshill, Glasgow. Type in the following codes before selecting the number of players.

HIGHLANDER: Makes the balls heavier
VACUUM CLEANER: Clears the high score table
EARTHQUAKE: Disables the Tilt function
FAIR PLAY: Resets all the cheat options.



TROLLS

Level skipping on Flair's imaginative platform title couldn't be easier. Start the game and walk to the 'Soda Pop' level door. Pull down to enter the level. When the level has loaded and you are shown the 'Get Ready' screen, push up on the joystick and hold the 'K' key while pressing the fire button to start the level. From this point on, all you need to do to complete the level you're on is hit the Escape key.



JOE AND MAC CAVEMAN NINJA

Elite's coin-op conversion isn't the easiest of Amiga games, but then again it wasn't when it was in the arcades. Here's some help to keep you on the right track.

The caveman carrying the rock will nearly always drop fruit. Hit him, and then jump on the rock he drops three times to get the fruit. Now and again you'll come across a caveman who isn't doing anything. When he wakes up and starts chewing, hit him for extra points. Vertically scrolling levels have a special Spaceman bonus. Stay on the right side of the screen to get this.

On levels 9 and 10, after you have defeated the spiky guy and the disk loads for the next level starts, hold the joystick left and hold the fire button until the bonus section starts. You'll float down slowly, and will be able to catch more bonus fruits.

TEARAWAY THOMAS

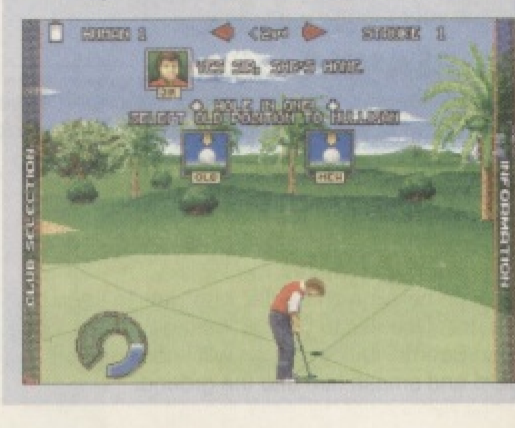
For Infinite time on DMI's smashing little platform game, type in 'Time Flies Like A Banana' (no spaces) at any point in the game. From that point on, you can take as long as you like!

NICK FALDO'S CHAMPIONSHIP GOLF

Are you finding that your casual slacks are clashing with your diamond-patterned sweater? Don't worry, because here is the ultimate guide to the first course in this difficult golf game, courtesy of Grandslam themselves. And if that isn't enough here's a cheat to help you get a hole in one every time.

First, you must be playing in amateur mode and stroke play. Play the hole as normal until you reach the green and sink the ball. Then select 'Old position to mulligan'. Sink the ball again and once more choose the mulligan. You'll find your stroke has gone down by one. You can repeat this as often as you like until you get that hole in one.

Hole 1: This is a long par 4 requiring an accurate tee shot to set you up for a mid-to-long 2 Iron.
Hole 2: This tricky Par 3 requires a long iron on to the green, but watch out for the water trap behind it.
Hole 3: You should reach the green of this Par 5 in two long, accurate strokes. This will set you up for a definite Birdie!
Hole 4: Forget the wristsnap and concentrate on a straight hit. The two bunkers have been positioned to catch any drive off line on this Par 4.
Hole 5: This easy Par 3 only needs a long straight iron onto the well sized green.
Hole 6: This short Par 4 offers a real Birdie possibility, being only 304 yards long.
Hole 7: The double water hazard makes your tee shot the key shot. Think about the positions from tee to green.
Hole 8: Consider a long iron off the tee to ensure good fairway position on this dog leg Par 4.
Hole 9: With water down the left side of the fairway, a hook is big trouble. Straight hitting should cause no problems on this simple Par 4.
Hole 10: No danger here, but be careful with the club selection.
Hole 11: A short par 4 that requires a straight tee shot and some finesse with a pitching wedge.
Hole 12: A long drive and a good fairway wood will leave you a putt away from an Eagle!
Hole 13: Wood selection is very important here, as the rough cuts into the fairway in three places on this par 4.
Hole 14: A nightmare Par 3. Use the right club and correct back spin or you'll be splashing around all day!
Hole 15: The most difficult hole on the course. Club selection is vital if you want to reach the island without penalty points.
Hole 16: Not a long par 5, but with the green surrounded by water, you might want to use two short positional shots, to make sure you can stop the ball on the green.
Hole 17: The toughest par 5 on the course. Make five with a position drive, two regulation irons and two putts.
Hole 18: Another dog leg, this one to the left. The narrow fairway makes positioning the important factor, and watch out for the two bunkers behind the green.



PART 3

The final instalment of our *Street Fighter 2* guide. Our top tipster Steve Keen is here to help you out of that tight corner. Let's ROLL!

STREE

KEN



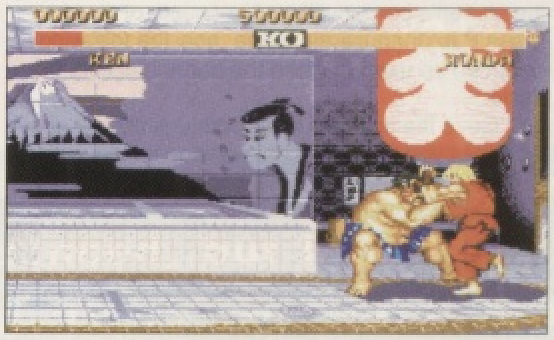
VS. GUILE
Guile jumps towards you all the time so use your Dragon Punch often. As he spends a lot of the time in the air the same tactics apply as with Chun Li.

VS. RYU
Get in close and use fast attacks to whittle him down. The only special move of any use is the Dragon Punch, so smash away with that!

VS. DHALSIM
Time your jumps so that you can get in close without getting hit and then attack. Alternatively, just stand back and throw Fireballs at him. Most aerial assaults directed at him will be countered with a kick.

VS. BLANKA
Although Blanka has a longer reach he still mysteriously jumps in on you. Dragon Punch him backwards into submission. If you let him dictate the fight you'll definitely come worse off.

VS. HONDA
Honda will try and over power you from close range with furious hand slapping attacks. Keep him back with Fireballs and leg sweeps if your timing's off. Hurricane Kicks work very well in keeping him away.



VS. ZANGIEF
Make full use of your Fireballs until Zangief gets in too close. Then switch to rapid punches and kicks. Not much energy will be taken off at first, but every little helps to flatten him.

VS. CHUN LI
Because of her great speed you have to time your Dragon Punches to perfection as she flies over your head. Use leg sweeps to hit her as she lands near you.

GUILE

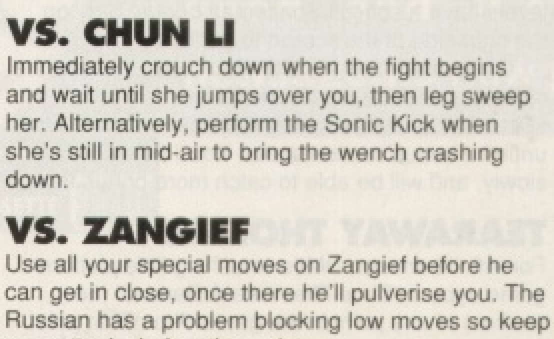


VS. KEN/RYU
Make good use of your Sonic Booms to counter Fireballs and to sneak in the occasional hit. In close combat use leg sweeps to hit the guys twice in rapid succession and you'll stun them and leave them at your mercy.

VS. BLANKA
Blanka relies on sheer power to win and for that he has to come at you all the time. Use the Sonic Kick to ward him off and quick punches when standing toe to toe. At a distance you can throw a Sonic Boom or two, but not too many!

VS. DHALSIM
For once here's a character who likes to keep his distance. Use this to your advantage and let loose Sonic Booms. Quick attacks will knock him off guard and smash him into the ground.

VS. HONDA
Keep the fat man back with those protective Sonic Booms, you'll score heavily at the beginning as he's pushed to the edge. High powered kicks can be used for close attacks and, if the weighty warrior uses the Sumo Torpedo, time a punch to catch him on the chin!



VS. CHUN LI
Immediately crouch down when the fight begins and wait until she jumps over you, then leg sweep her. Alternatively, perform the Sonic Kick when she's still in mid-air to bring the wench crashing down.

VS. ZANGIEF
Use all your special moves on Zangief before he can get in close, once there he'll pulverise you. The Russian has a problem blocking low moves so keep your attacks below the waist.

KEN VS. THE BOSSES

VS. BALROG
Keep the guy at a good distance with constant Fireballs. Balrog's very vulnerable to Hurricane Kicks so unleash plenty, especially when he turns his back on you for a power punch.

VS. VEGA
Never let Vega get in too close. He's incredibly fast so bombard the Spanish devil with Fireballs and Hurricane Kicks. If he climbs the fence for the Inza Drop, prepare a Dragon Punch and, if you hit him on the way down, he'll be damaged beyond belief!

VS. SAGAT
Get in close as quick as you can, but don't leap in or he'll upper cut you. Use a Hurricane Kick to get next to him and then wipe him out with short sharp punches and kicks.

VS. BISON
Use fast attacks when he vertically leaps at you and if you're lucky one of them will land before he hits you! If Bison does the Flaming Spear attack jump over it, there's no blocking so don't even try.



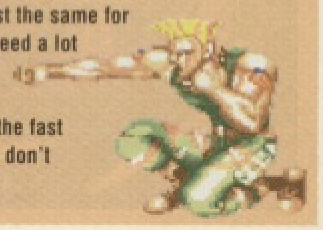
GUILE VS. THE BOSSES

VS. BALROG
Even though he's slow Balrog can really punch. Try and keep at a distance and fight with Sonic attacks. When he turns for the power punch use a flying kick and then hit him with everything you've got.

VS. VEGA
Another one who should be kept at a distance. When he climbs the fence, either time a Sonic Kick to catch him on the way down or jump to the back of the screen out of his way. Quick punches are the only ticket out of a close fight.

VS. SAGAT
Sagat is actually pretty easy for Guile. Leap in close with a quick punch and catch Sagat off guard then follow up with a leg sweep to stun him. Simply repeat until he's out for the count.

VS. BISON
Beating Bison is almost the same for every character. You need a lot of luck and must stay clear of that Flaming Spear attack! Keep to the fast punches and kicks and don't try anything fancy.



ETFIGHTER 2

BLANKA VS. THE BOSSES

VS. BALROG
Attack with a roll then follow up with an upper cut and a leg sweep. Keep advancing forward until he's pinned in the corner and finish off with shock treatment!

VS. VEGA
Just stand still and let Vega jump at you then fry him as he lands on top of you with electricity.

VS. SAGAT
Jump straight up into the air and hit with a downward swinging claw attack. Immediately follow up with an upper cut. If he jumps towards you fry him!

VS. BISON
Stay in the middle of the screen. Crouch and block at the beginning and he'll leap towards you. Catch him with a leg sweep as he lands. If he uses the Flaming Spear, upper cut to to the chin.



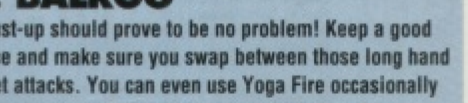
DHALSIM VS. THE BOSSES

VS. BALROG
This bust-up should prove to be no problem! Keep a good distance and make sure you swap between those long hand and feet attacks. You can even use Yoga Fire occasionally for a bit of variety! If he gets too close just chop the blighter in the neck.

VS. VEGA
Vega will usually be able to get in close pretty quickly so the only moves you should bother with are the sliding kick attack and low chops, changing quickly between the two to throw him off. If you manage to stun Vega move in for a throw and immediately punch or kick him.

VS. SAGAT
You could have your work cut out here. Attack with Yoga Fire at the beginning and, whilst it's travelling through the air, use low punches to keep Sagat occupied. Repeat the process.

VS. BISON
The only chance you have of winning this fight is if you can keep Bison at a safe distance, which is considerably hard to do! If he leaps at you, either attack with a long kick or time a Yoga Fire move. Follow it up immediately with a long low punch. If Bison uses his Flaming Spear attack, slide into him and then turn around and kick. In close range combat, the only thing you can do is block until he moves away.



BLANKA

VS. KEN/RYU
Use a rolling attack to get in close and then adopt combinations of punches and kicks to thrash the twins. If you can pin them in the corner pump up the Electric Shock for an instant victory.

VS. CHUN LI
Power up that electricity in readiness for roasted chick-(en)! As you've discovered by now she can't stop jumping over you so burn her bones every time!



VS. HONDA
Don't let Honda get in close and use his powerful kicks. No real tactics here just keep it low.

VS. GUILE
As Guile leaps towards you crouch down and hit his feet away from underneath him with a kick. Then claw him with double handed attacks and repeat.



VS. DHALSIM
Get in close quickly with the rolling attack and then hammer away with spinning claws and fast kicks and punches.

VS. ZANGIEF
Blanka's a lot faster than Zangief so lure the Russian forward then hit him with electricity as he walks into you. Follow up with a well timed rolling attack as he comes out of the shock. Otherwise, keep it simple and you'll win.

DHALSIM

VS. KEN/RYU
You must keep leaping forwards and backwards with kicking attacks to counter their Fireballs. Get in close and pummel away with punches.

VS. CHUN LI
When she's in mid-air slide forward, turn around and punch her in the legs as she lands.



VS. GUILE
Immediately open with a torpedo attack, then quickly force Guile into a corner with sliding kicks and long range punches. Finish off with low kicks and punches.

VS. BLANKA
All you have to do is alternate between long punches and kicks to beat the beast. Don't jump in on him or you'll be fried.

VS. HONDA
Use the same tactics as with Blanka. If he does get in close use loads of chops to force him back again and repeat.

VS. ZANGIEF
Once again the long reach of Dhalsim comes to the rescue. Just keep stabbing at those long range attacks for victory and the mighty Russian won't stand an earthly! Keep your distance to avoid the crushing attacks.





PD DiRECT — MEGABLITZ!

THE ONE STOP SHOP FOR *AMIGA*® PUBLIC DOMAIN

UTILITIES

PDU 16 **AIR TUNNEL SIMULATOR** (P)
PDU 32 **FISH#144 ANALYTIC S/SHEET** (P)
PDU 99 **HAM RADIO UTILITIES** (P)- 5 DISKS
PDU 101 **MENU MAKER** (P)
PDU 102 **LABEL DESIGNER** (P)
PDU 103 **ICON MAKER** (P)
PDU 104 **ICON MANIA** (P)
PDU 105 **CROSSWORD CREATOR** (P)
PDU 151 **FIXDISK** (P)
PDU 366 **IBEM** - PC EMULATOR (P) SHAREWARE DEMO
PDU 367 **ATARI ST EMULATOR** - ENGLISH
PDU 368 **ZX SPECTRUM EMULATOR**
PDU 369 **C64 EMULATOR**
PDU 370 **FLEXIBASE** - DATABASE (P)
PDU 375 **MED 3.20** - MUSIC EDITOR WITH MIDI (P)
PDU 377 **M-CAD** - DESIGN PROG (P)
PDU 378 **TRANSFORMER v3.3** - IBM EMULATOR
PDU 380 **TEXT PLUS v3.0en** - GOOD WORD PROCESSOR (P)
PDU 382 **MESSYSID II** - READ/WRITE PC DISKS (P)
PDU 383 **SPECTRA PAINT v3.2** (P)
PDU 384 **DISK MASTER v3.2** (P)
PDU 385 **ELECTROCAD v1.4** - SHAREWARE DESIGN PROGRAM (P)
PDU 386 **AMIGAFOX** - DTP PROGRAM (P)
PDU388 **600 BUSINESS LETTERS** (P)
PDU 389 **B-BASE II** - EXCELLENT, FAST DATABASE (P)
PDU 391 **FORMS REALLY UNLIMITED** (P)
PDU 398 **AMIBASE PROFESSIONAL 2** (P)
PDU 399 **D-COPY v2.0** (P)
PDU 403 **NORTH C** - 2 DISKS (P)
PDU 407 **OPTI UTILS #1** - GREAT! (P)
PDU 408 **OPTI UTILS #2**- EVEN BETTER (P)
PDU 409 **GELIGNITE FONTS #1**

HOME BUSINESS PACK

THIS 8 DISK PACK CONTAINS TEXT ENGINE v3.4 - WORD POCESSOR, B-BASE II DATABASE, VISICALC SPREADSHEET, DTP PROGRAM, 600 BUSINESS LETTERS, BUSINESS CARD MAKER, BANKING UTILS AND A FORMS DESIGNER (A500+/A600 compatible)

A MUST FOR HOME BUSINESS USERS !

£12.00

PDU 410 **SUPERSOUND II** - THIS IS THE LICENCEWARE VERSION NOW RELEASED AS PD. THE BEST SAMPLER YET! (P)
PDU 411 **IMPLODER v4.0** - GOOD COMPRESSION UTIL (P)
PDU 412 **HARD DRIVE UTILS** (P)
PDU 413 **PROFESSIONAL D.COPY v 3.0** - EXCELLENT!
PDU 414 **SID v2.00**-NEW VERSION OF THE BEST DIRECTORY UTILITY (P) SHAREWARE
PDU 416 **NIB COPIER v2.0** - VERY POWERFUL PARAMETER DISK COPIER, BACKS UP YOUR PROTECTED DISKS
PDU 419 **SUPERKILLERS v2.5** - THE BEST VIRUS KILLER (P)
PDU 421 **OCTAMED v1.00b** - FULL VERSION OF THE 8 CHANNEL MUSIC EDITOR (P)
PDU 423 **BOOT INTRO CONSTRUCTION SET** - CREATE CUSTOM BOOT LOADERS FOR YOUR DISKS (P)
PDU 425 **AMOS UPDATER v1.34** (P)
PDU 427 **PRINTER DRIVERS** - STAR LC10, HP DESKJET & PAINTJET PLUS MANY OTHERS (P)
PDU 429 **KING JAMES BIBLE** - COMPLETE TEXT WITH SEARCH ON FOUR DISKS (P)
PDU 430 **ASTRO 22** - SUPERB SHAREWARE ASTROLOGY PROGRAM FOR THE ENTHUSIAST (P)
PDU431 **DPAINT FONTS** - EXCELLENT CUT'N'PASTE FONTS ON 2 DISKS (P)
PDU 433 **PC-TASK** - SHAREWARE PC EMULATOR (P)
PDU 435 **TEXT ENGINE v3.4**-BRILLIANT WORD PROCESSOR (P)

CLIP ART PACK

THIS IS AN **ALL NEW** COLLECTION OF 13 DISKS, EXCLUSIVE TO US. THEY ARE TOTALLY MENU DRIVEN, SO ARE EASY TO USE. THERE ARE OVER 1000 IMAGES IN IFF FORMAT AND ARE IDEAL FOR DPAINT OR DTP. FROM FLAGS TO FAMOUS PEOPLE AND FROM FANCY BORDERS TO VIZ CHARACTERS.........PROBABLY THE BEST CLIP ART AVAILABLE AT ANY PRICE! (A500+/A600 compatible)

ALL 13 DISKS FOR ONLY

£15.00

PDU 436 **TYPING TUTOR** - INCLUDES SIGN LANGUAGE TUTOR (P)
PDU 437 **WORD POWER** - SHAREWARE SPELL CHECKER P
PDU 438 **STAR PRINTER DRIVERS** - 9 & 24 PIN MONO AND COLOUR DRIVERS DIRECT FROM STAR (P)
PDU 442 **FREECOPY v1.8** - RENOWNED COPIER (P)
PDU 443 **DIR WORK v1.51** - CONFIGURABLE DIRECTORY UTILITY, SIMILAR TO SID (P)
PDU 444 **FREEPAINT** - ART PACKAGE WITH ANIMATION (P)
PDU 445 **DOC DUMP**- CREATES SMALL BOOKLETS FROM TEXT FILES, THE ULTIMATE PRINT UTILITY (P)

EDUCATIONAL

PDE 1 **LEARN & PLAY #1** - A SUITE OF PROGRAMS FOR YOUNG CHILDREN (P)
PDE 2 **LEARN & PLAY #2** (P)
PDE 3 **STORYLAND 2** - SAVE TOYLAND FROM THE WITCH (P)
PDE 4 **TOTAL CONCEPTS ASTRONOMY** - INTERACTIVE BOOK (P)
PDE 5 **TOTAL CONCEPTS DINOSOARS** (P)
PDE 6 **KIDSPAINT** (P)
PDE 7 **MR MEN STORIES** - ILLUSTRATED READING AID
PDE 8 **SIMON SAYS & SPACE MATHS** - VERY GOOD (P)
PDE 9 **HOORAY FOR HENRIETTA**- DEMO FROM LANDER (P)
PDE 10 **SPELLBOUND** - ANOTHER DEMO FROM LANDER (P)
PDE 11 **HENRIETTA'S BOOK OF SPELLS** - DEMO (P)

RED SECTOR INC.

PDU 401 **RED SECTOR DEMO MAKER** - WITH DOCS
PDU 364 **RSI EXTRAS #1**
PDU 392 **RSI EXTRAS #2**
PDU 393 **RSI VECTOR OBJECT EDITOR**
PDU 394 **RSI FONT EDITOR**
PDU 395/6/7 **RSI MUSIC MODULES DISKS**
PDU 372 **RSI VECTORBALLS EDITOR**
PDU 365 **TSB VECTOR DESIGNER**

GAMES

PDG 1 **STAR TREK**-TOBIAS RICHTERS VERSION 2 DISKS (P)
PDG 2 **STAR TREK** - BY ERIC GUSTAVSON, 3 DISKS, REQ 2 DRIVES, RECOMMENDED (P)
PDG 32 **LEGEND OF FARGHAIL** (P)
PDG 35 **PAIR IT** - EDUCATIONAL GAME (P)
PDG 46 **FRUIT MACHINE, POOL & OTHERS**
PDG 50 **SEALANCE** - SUBMARINE COMMAND GAME (P)
PDG 60 **AIR ACE II** - WWII SHOOT-EM-UP (P)
PDG 61 **ELECTRIC TRAIN SET** (P)
PDG 62 **ZX SPECTRUM GAMES** VOL 1 INC EMULATOR
PDG 63 **ZX SPECTRUM GAMES** VOL 2 INC EMULATOR (P)
PDG 70 **DRIP!** - VERY GOOD PIPE GAME (P)
PDG 71 **LLAMATRON** - BY JEFF MINTER
PDG 73 **TWINTRIS** - THE BEST VERSION (P)
PDG 75 **TANX THE GAME**- THE MOST ADDICTIVE GAME (P)
PDG 77 **STAR TREK THE NEXT GENERATION**- BY TERRY MCINTOSH HI-RES GRAPHICS (P)
PDG 83 **JEOPARDY**- RISK TYPE GAME (P)
PDG 86 **CRAZY SUE**
PDG 87 **AMIGA COLUMNS** - WELL REVIEWED (P)
PDG 88 **REVENGE OF THE MUTANT CAMELS** - J. MINTER
PDG 89 **NEW STAR TREK** - BY JIMBO BARBER, 2 DISKS
PDG 91 **LEGEND OF LOTHIAN** - ULTIMA TYPE ADVENTURE (P)
PDG 92 **ASHIDO** - ORIENTAL TILE GAME..GOOD! (P)
PDG 94 **LEMMINGOIDS** - LIKE ASTEROIDS !!!!NOT
PDG 95 **INTERNATIONAL CRICKET** - GOOD SHAREWARE GAME, VERY PLAYABLE (P)

GAMES PACK

THIS **NEW** 12 DISK PACK HAS ALL OF THE LATEST AND BEST PD GAMES. THEY ARE EASY TO USE AND VERY GOOD QUALITY ALL ARE COMPATIBLE WITH A500+/A600

A MUST FOR ALL GAMERS!

£15.00

PDG98 **MENTAL IMAGE GAMES #1** - GRIDRUNNER, INVADERS & REBOUND (P)
PDG 99 **MENTAL IMAGE GAMES #2** - INVADERS II, WILLY & SATU, VERY GOOD (P)
PDG 102 **TOTAL WAR** - STRATEGY GAME (P)
PDG 104 **E-TYPE** - THE DEFINITIVE ASTEROIDS (P)
PDG 105 **MANIA** SHOOT SADDAM & THE IRAQUI ARMY (P)
PDG 106 **AIRPORT** - ATC SIMULATOR (P)

WE NOW STOCK ALL OF THE ASSASSINS GAME DISKS THEY ARE WELL PRESENTED, EASY TO USE AND CONTAIN ALL OF THE LATEST AND BEST PD GAMES...GREAT VALUE ...TAKE A LOOK!

PDG 109 **ASI#1** - TANX, ROLLERPEDE, AMIGOIDS, CAVE RUNNER, AVATRIS
PDG 110 **ASI#2** - GIRL ACTIONS, MISSILE COMMAND, INVADERS, BALLY II, MAZE GAME, THINK AHEAD
PDG 111 **ASI#3** - MEGA BALL, DRIP! (P)
PDG 112 **ASI#4** - JUMPER, GOMOKU, CRACKER, JUMPY, TURBO DUEL, KLONDYKE (P)
PDG 113 **ASI#5** - GO LOOLY, RETALIATOR, RAID (P)
PDG 114 **ASI#6** - DOWNHILL CHALLENGE, PACMAN '87, METAGALACTIC LLAMAS, WELLTRIX
PDG 115 **ASI#7** - DESTINATION MOONBASE, TRIX, NIGHTWORKS, CLOUD RUNNER
PDU 116 **ASI#8**- AIR ACE II, H-BALL, NUMBER FUMBLER, SNAKE PIT
PDG 117 **ASI#9** - BLIZZARD, BATTLE PONG
PDG 118 **ASI#10** - PICKOUT , ESCAPE, SYS, PIPELINE (P)
PDG 119 **ASI#11** - DAD, CONNEX, TOWERS OF HANOI, REVERSI, TRIPPIN' (P)
PDG 120 **ASI#12** - CAR, LLAMATRON, POWER PONG, XFI
PDG 121 **ASI#13** - BALL, ASTEROIDS, TWINTRIS, BLOCK-IT, SQUAMBLE, AMIGATRATION (P)
PDG 122 **ASI#14** - CHINA CHALLENGE II, AMIGA COLUMNS (P)

ASSASSINS PACK

THIS IS A **NEW** COLLECTION OF THE FIRST 35 ASI GAMES DISKS. THERE ARE OVER 100 GAMES. ALL MENU DRIVEN.....VERY EASY TO USE.... IDEAL FOR THE KIDS

ALL 35 DISKS FOR ONLY........

£34.95

PDG 123 **ASI#15** - BATTLE CARS, MAMBA MOVE
PDG 124 **ASI#16** - PACMAN, WASTELANDS, DILEMMA, MISSION-X (P)
PDG 125 **ASI#17** - JETMAN, DEFENDA, TOWCAT, BUGBLASTER (P)
PDG 126 **ASI#18** - OMEGA RACE, SKY FLYER, HENRY IN PANIC, MEGATRON
PDG 127 **ASI#19** - GROWTH, BLOB BLOX, FLIGHT, BI-PLANE DUEL, SLIDER, FRANTIC FREDDY
PDG 128 **ASI#20** - AMOS COIN DROP, MICROBES, HOLLYWOOD TRIVIA, MATCH PATCH (P)
PDG 129 **ASI#21** - ZUES, TETTRIX, TILES, BATTLEMENTS
PDG 130 **ASI#22** - LEMMINGOIDS, DUEL, MOUTH MAN, WIZZY'S QUEST (P)
PDG 132 **ASI#24** - REVENGE OF THE MUTANT CAMELS, NEBULA, CROAK, 3D MAZE, DUX (P)
PDG 133 **ASI#25** - E-TYPE, ASTEROIDS, HEMROIDS, COPPER, MR WOBBLY, MR BRICK (P)
PDG 134 **ASI#26** - SUPER PACMAN '92, SMASH TV, ASHIDO, BALLY III, SYSTEM IV
PDG 135 **ASI#27 CARD GAMES**
PDG 144 **ASI#36**- WONDERLAND, SUB ATTACK, MOTHER LODE, TACTIX, DONKEY KONG (P)
PDG 145 **ASI#37** - KLAKTRIS, PACCER, POD, GHOST SHIP (P)
PDG 146 **ASI#38** - ONE ON ONE, SKYFLYER 2, BALDY, TRANSPLANT, (P)

GAMES CONTINUED..

PDG136 **ASI#28** - DOODY, DR MARIO, INVADER II, FLAG CATCHER, MAD BOMBER (P)
PDG 137 **ASI#29** - DOG, ROME, NOVA, BRIDGE BALL, ATTACKS, QUADRIX (P)
PDG 138 **ASI#30** - CHROME, TANK ATTACK, TOTAL FIRE, BOUNCE'N'BLAST (P)
PDG 139 **ASI#31** - ISHID-O-MATIC, CRAZY PIPES, ARAZMAX, REVOLUTION (P)
PDG 140 **ASI#32** - BLOB, FIRE FIGHTER, SECTOR ONE (P)
PDG 141 **ASI#33** - TOTAL WAR, HYPERBALL (P)
PDG 142 **ASI#34** - TRAIL BLAZER, YELP, Q-BIX, RUSH HOUR (P)
PDG143 **ASI#35** - PONG, SNAKE PIT, JUMP & ROLL, CYBERNETIX (P)
PDG 147 **ASI#39** - NEW CARD GAMES (P)
PDG 148 **ASI#40** - PUZZLE COLLECTION (P)
PDG 149 **MINE SWEEPER** - SIMILAR TO WINDOWS VERSION (P)

DEMOS

PDD 1 **ANARCHY DEMO**
PDD 7 **ELVIRA DEMO**
PDD 16 **ROBOCOP DEMO** (P)
PDD 31 **ANRCHY "OOH! IT'S OBSCENE 3"**
PDD 72 **RED SECTOR DEMO #4**
PDD 76 **SCOOPEX MEGA DEMO** (P)
PDD 97 **PREDATORS MEGADEMO** (P) 2 DISKS
PDD 98 **SAFE SEX DEMO** (P)
PDD 107 **BUDBRAIN #1** - 2 DISKS (P)
PDD 130 **CHUBBY BROWN DEMO** (P)
PDD 153 **BILLY CONNOLLY DEMO** - 2 DISKS (P)
PDD 160 **HATRICK -"RAVE ON"**
PDD 177 **BUDBRAIN 2**
PDD 287 **PHENOMENA ENIGMA** (P)
PDD 288 **PHENOMENA TERMINATOR**
PDD 311 **ODDESSEY** - BY ALCATRAZ ... NEARLY AN HOUR OF BLISTERING VECTOR MOVIE WITH BRILLIANT SOUND (5 DISKS)
PDD 312 **HARDWIRED** BY CRIONICS/SILENTS (2DISKS)
PDD 313 **VOYAGE** - RAZOR 1911 (P)
PDD 314 **RED SECTOR "TIME ZONE"** (P)
PDD 315 **ENJOY THE SILENTS** (P)
PDD 316 **DIGITAL INNOVATION** - 26 MINS LONG ! (P)
PDD 317 **SYSTEM VIOLATION** - BY ANARCHY (P)
PDD 318 **JESUS ON E's** - ABSOLUTELY SUPERB!!! (P) 2 DISKS
PDD 319 **ANARCHY "IN THE KITCHEN..."** (P)

ANIMATIONS

PDA 12 **STAR TREK - AGATRON #2** (P)
PDA 13 **STAR TREK - AGATRON #17**
PDA 5 **MOONWALKER**
PDA 54 **NASA GRAPHICS**
PDA 80 **WALKER II** - 2 DISKS, 2MB REQD (P)
PDA 82 **AGATRON "ENTERPRISE LEAVING DOCK"** (P)
PDA 123 **STEALTHY MANOEUVERS** -BY ERIC SCHWARTZ (P)
PDA 306 **ANTI LEMMIN' DEMO** - 2 DISKS REQ 2MB (P)
PDA 134 **THE DATING GAME** - SCHWARTZ 2 DISKS 3MB (P)
PDA 135 **BUZZED** - RAY TRACED ANIM, 3 DISKS, 3MB (P)
PDA 136 **AT THE MOVIES II** - BRILLIANT! 4 DISKS, WORKS WITH 1MB BUT THE MORE MEMORY THE BETTER (P)
PDA 138 **AT THE BEACH** -ERIC SCHWARTZ 3MB, 2 DISKS (P)
PDA 139 **UNSPORTING** - EXCELLENT AEROTOON 2MB (P)
PDA 142 **GULF CONFLICT** - SUPERB! 2MB(P)
PDA 143 **SWEET REVENGE** - WILE. E COYOTE GETS THE DROP ON ROAD RUNNER...... 1.5MB REQD (P)
PDA 144 **HOW TO RUN / COYOTE 2** - E. SCHWARTZ (P)
PDA 145 **AMY WALKS/ AMY JOGS/ THE BIG SNEEZE** (P)
PDA 147 **CHARLEY THE CAT** - 2MB, 2 DISKS , VERY GOOD (P)
PDA 148 **CHARLEY THE CAT II**- 2MB, 2 DISKS, BETTER ! (P)
PDA 149 **LINUS** - BRILLIANT ANIM (P)

LATEST CLIP ART

NEW.....NEW.....NEW.....NEW.....NEW.....NEW.....NEW.....NEW

PDU 453 **WEDDINGS** - 2 DISKS (P)
PDU 454 **HOUSES** - 2 DISKS (P)
PDU 455 **FANCY BORDERS** 2 DISKS (P)
PDU 456 **COLOURING BOOK** - IDEAL FOR KIDS! (P)
PDU 457 **MEN AT WORK** - 2 DISKS (P)
PDU 458 **WOMEN AT WORK** - 2 DISKS (P)
PDU 459 **SPORT** - 2 DISKS (P)
PDU 460 **ANIMALS** (P)
PDU 461 **CATS** (P)
PDU 462 **FLORAL** (P)
PDU 463 **WORLD WAR II AIRCRAFT** (P)
PDU 464 **MYTHOLOGY** (P)
PDU 465 **CHURCH & PASTORAL** - 3 DISKS (P)
PDU 466 **AFRICAN WOODCUTS** (P)
PDU 467 **WOODCUT CATS** (P)
PDU 468 **WOODCUT DOGS** (P)
PDU 469 **AMERICAN WOODCUTS** (P)
PDU 470 **ARCTIC WOODCUTS** (P)
PDU 471 **FARM WOODCUTS** (P)
PDU 472 **MIXED ANIMAL WOODCUTS** (P)
PDU 473 **BIRD WOODCUTS** (P)
PDU 474 **BUTTERFLIES** (P)
PDU 475 **BANNER ART** (P)
PDU 476 **VEGETARIAN CLIPS** (P)
PDU 477 **SALE TIME ART** (P)
PDU 478 **BUSINESS** (P)
PDU 479 **SAILORS, FISHERMEN, SEA LIFE** (P)
PDU 480 **SHOW TIME** (P)

ALL OF THE ABOVE ARE HUGE, HIGH QUALITY IMAGES. THE DISKS ARE AUTO BOOTING WITH SLIDESHOW VIEWERS. MULTIPLE SETS ARE AVAILABLE AS SINGLE DISKS.

LATEST DISKS

PDU 446 **AMOS COMPILER UPDATE v1.34** (P)
PDU 447 **NUKE v1.5B** - SADDAM KILLER (WB 2.0 ONLY)
PDU 448 **SCALEABLE FONTS** - 5 DISK SET (P)
PDU 450 **SOUND TRACKER v 2.6** (P)
PDU 451 **NOISE PLAYER v 4.0** (P)
PDU 488 **MAZE MAPPER** - A MUST FOR ADVENTURERS (P)
PDU 481 **NUCLEAR FONTS** - CUT N PASTE FONTS, VERY GOOD QUALITY (P)
PDU 482 **GELIGNITE FONTS II** - MORE IFF FONTS, SUPERB (P)
PDU 483 **GELIGNITE FONTS III** - BRILLIANT AGAIN! (P)
PDU 484 **LAND BUILD v3.2** - LANDSCAPE GENERAION PROGRAM SHAREWARE, VERY GOOD! (P)

KICK 1.3...

THIS SUPERB DISK IS THE ANSWER TO COMPATIBILITY PROBLEMS FOR **A500+/A600/A1200** OWNERS. IT WILL MAKE MANY OF YOUR UNUSABLE DISKS WORK ON THESE MACHINES.AN ABSOLUTE MUST FOR ANY **WB2.0 OR 3.0 USER....RECOMMENDED !** IT DOES THE SAME JOB AS A ROM SHARER (*Amiga Format Mar 93*)

ONLY.....£1.75

THIS HAS GOT TO BE ONE OF THE BEST DISKS THIS YEAR!.....

PDD 320 **XPOSE DEMO** - BY THE SILENTS 2 DISKS (P)
PDD 321 **WILDFIRE MEGADEMO**
PDD 322 **MAXIMUM VELOCITY DEMO**
PDU 485 **CLI HELPER (P)**
PDU 486 **TACK** - ANIMATION CONSTRUCTION KIT (P)

MUSIC DISKS

PDM 9 **RIDE ON TIME/ BAT DANCE** (P)
PDM 19 **BAD - MICHAEL JACKSON** (P)
PDM 20 **BAT DANCE** (P)
PDM 27 **D-MOB MEGAMUSIC III**
PDM 225 **DIGITAL DISCO**
PDM 226 **PROTON MUSIC** (P)
PDM 227 **HARDCORE III** - YOU KNOW THE SCORE..SPACIOUS
PDM 228 **JESTERDAY** - BY SANITY (P)
PDM 212 **GARFIELD SINGS**
PDM 161 **NASP v3.2** - 2 DISKS, WELL REVIEWED (NOW WB2.0)
PDM 131 **PET SHOP BOYS #1** - HIT MUSIC (P)
PDM 132 **PET SHOP BOYS #2** - MANIX REMIX (P)
PDM 38 **MIAMI VICE THEME** - 4 DISKS
PDM 40 **MFI VANGELIS DEMO** (P)

MUSIC MAKERS PACK

MED 3.20 MUSIC EDITOR, SOUNDTRACKER v2.6, STAR TREKKER, 3 SONGS DISKS, 4 INSTRUMENTS DISKS. THIS IS OUR BEST SELLING PACK (A500+/A600 compatible)

A MUST FOR HOME MUSICIANS !

£12.00

PDM 30 **DIGITAL CONCERT II**
PDM 31 **DIGITAL CONCERT III**
PDM 65 **DIGITAL CONCERT IV**
PDM 85 **MIAMI VICE "CROCKET'S THEME"** (P)
PDM 91 **100 MOST REMEMBERED C64 TUNES** (P)
PDM 95 **HI FI DEMO** (P)
PDM 106 **BETTY BOO** (P)
PDM 117 **FLASH GORDON** - 2 DISKS (P)
PDM 230 **TRIPPIN'** -BY THE BLACK JACKSON, SUPERB!

SUPER SOUND III

THIS IS THE LATEST VERSION OF THE BRILLIANT SAMPLING SOFTWARE BY K.B.E. IT WILL ADD REVERB AND LOADS OF OTHER REAL-TIME FX TO YOUR SAMPLES.
COMPATIBLE WITH MOST SAMPLING HARDWARE. IT IS NOT PD AND ROYALTIES ARE PAID TO THE AUTHOR (P)

£3.50

PDM 118 **HACKTRICK "LOADSAMONEY"** (P)
PDM 120 **LAUREL & HARDY** - 2 DISKS (P)
PDM 185 **PARASITES KLF**
PDM 72 **POPEYE MEETS THE BEACHBOYS** (P)
PDM 82 **FREDDY KRUEGER**
PDM 83 **KEFRENS JUKE BOX**
PDM 104 **BASS X #5 POWER REMIX**
PDM 105 **BASS X #6 SIDNEY YOUNGBLOOD** (P)
PDM 229 **NASP IV** - 2 DISKS, LATEST VERSION (P)

CATALOGUE DISK

OUR NEW DATA BASE CATALOGUE CONTAINS DETAILS OF OUR COMPLETE DISK COLLECTION. TO RECEIVE YOUR COPY SEND 3 FIRST CLASS STAMPS. ALTERNATIVELY, YOU CAN HAVE ONE FREE WITH YOUR FIRST ORDER ON REQUEST

REMEMBER.......
WE STOCK ALL OF THE FRED FISH DISKS WHICH ARE NOW UP TO DISK No. 790

WE HAVE T- BAG DISKS 1 TO 63

WE ARE AN AUTHORISED *DEJA VU* DISTRIBUTOR

LATEST DEJA VU DISKS

THESE ARE LICENCEWARE AND COST £3.99 EACH

L 128 **TOWER HILL** -GOOD ICON DRIVEN GRAPHIC ADVENTURE (P)
L 127 **THE VIKING SAGA** - ROLE PLAYING STRATEGY GAME (P)
L 126 **GREENIES** -WELL THOUGHT OUT 3PLR MAZE GAME (P)
L 125 **MIRAGE COLLECTION vol 1** - INCL LYNX FILE COPIER FOR SINGLE DRIVE USERS & ILD DATABASE (P)
L 123 **SHOOT 'EM BADDIES** - MOUSE CONTROLLED V.GOOD (P)
L 122 **TELL THE TIME** - GREAT EDUCATIONAL PROGRAM (P)
L 115 **ROOTS** - FAMILY HISTORY PROGRAM (P)
L 112 **INVOICE/ ORDER MANAGER** - INVOICE PRINTER (P)
L 110 **MONEY SPINNER** - SPACE TRADING GAME (P)
L 104 **MONEY MONITOR** - BANKING PROGRAM (P)
L 101 **MORSE CODE TUTOR** (P)
L 98 **POWERTEXT** - WORD PROCESSOR (P)
L 91 **FUN TO LEARN** (P)
L 90 **CONCERT BOX** - LEARN BASIC MUSIC THEORY (P)
L 59 **THE PREHISTORIC FUN PACK** (P)
L 47 **DIRTY CASH** - FRUIT MACHINE SIMULATOR (P)
L 44 **FORMULA ONE CHALLENGE** (P)
L 35 **T-TECDRAW** - DESIGN PROGRAM (P)

..........STOP PRESS..........

PDU 487 TEXT ENGINE v4.0

THIS IS THE LATEST VERSION OF THE SUPERB WORD PROCESSOR BY NICHOLAS HARVEY. NOW WITH A 36,000 WORD SPELL CHECKER

HOW TO ORDER

MasterCard — VISA

DISK PRICES

1 - 9 .... £ 1.75 each
10 - 19 .... £ 1.50 each
20+ .... £ 1.25 each
Deja Vu disks....................... £ 3.99 each

P = Compatible with A600 / A500 Plus

Postage & Packing is FREE on all orders of 3 disks or more.Less than 3 disks please add£1.00.
Europe add 25p per disk.
Rest of World add 50p per disk.

PAYMENT

We accept all major credit cards
Please make cheques and P.O's payable to **PD DIRECT** and send to:

PD DIRECT
DEPT. CU4
86 GEORGE STREET
NEWCASTLE
STAFFORDSHIRE
ST5 1DN

PERSONAL CALLERS WELCOME .... WE ARE OPEN FROM 9.30 - 6.00 MONDAY TO SATURDAY

TELEPHONE OR FAX
0782 715255



THE TROLLS HEAD

There is a place that the seasoned adventurer knows well. In those forgotten kingdoms where dragons roam and werewolves prowl, you can always find a warm spot by the bar in the Troll's Head Inn.

RULES OF THE INN



1. Blue Hedgehogs and Italian Plumbers with moustache will not be served in the bar until further notice.
2. Please tether all Werewolves securely.
3. There is an 'outside' toilet. Please use it!
4. Adventurers affecting silly names begining with the letters 'Z' or 'K' will be asked to leave.
5. Please do not ask what is in the Chef's Special – as it sometimes offends.

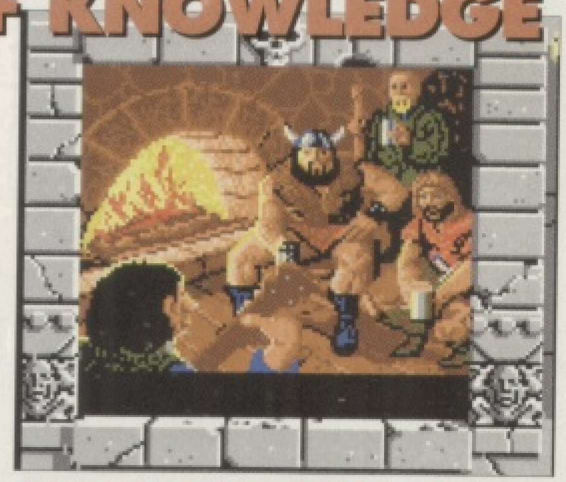
HEROES WANTED BOARD



The puzzles, traps and monsters in *The Temple of Darkmoon* were certainly too tough for the unwary adventurer. However, with the experience gained at the Temple your party should be ready to take on Myth Drannor.

Let it be known that parties of heroes are required for an exciting quest now under construction – codename *EOB III*. Previous quests by the same builder (Strategic Simulations) include *Eye of the Beholder* and *Temple of Darkmoon*. Those groups who are selected will be required to take part on an 'Assault on Myth Drannor' – a ruined city set in the Forgotten Realms. Preferential selection will be given to groups who have taken part in the previous expeditions as they will fit perfectly into this new campaign. The Myth Drannor assault will be 50 percent larger than its predecessor and the action will take place in various locations including a forest, mausoleum, temple and several guilds. There will be 35 new monsters taking part in this exercise, plus even finer graphic illustrations. The quest is expected to be the most complex yet devised by this award winning construction team and interest is expected to be extremely high. Watch this space for more details.

THE SHRINE OF KNOWLEDGE



Kneel before the Shrine in humble penitence, confess your ignorance, and just maybe your question will be answered. Remember to always ask politely and pop the gold coin into the letter before you send it in. [*Hold on, the Shrine's free. Stop trying to bump up your pay – Ed.*]

SPACE QUEST III

Alex Bannan from Coventry has written to say that he was recently mugged by a rat. Well, I thought all muggers were rats, but Alex is referring to the rat in *Space Quest III* which steals the power reactor from you on-route to the wrecked space-ship. Alex also wishes to know whether the Shrine would class this game as easy, medium or hard as he likes this type of graphic adventure but he can't seem to get anywhere with it.

The Shrine replies: The reactor is the source of power for the lights in the basement. Don't you remember that when you disconnected it the lights went out? The rat in question was half way through reading his CU Amiga mag (you'd be surprised how many readers of the Troll's Head column are rats!), when you cut the lights. If you return to the basement you'll find the lights are on again because the rat has put the reactor back in place. I would say the difficulty level for this game is medium, but like all games it does have a couple of problems which can fox anyone. Space Quest IV is much easier and has a lot more laughs. Another one of the easier Sierra adventures which is even funnier is the first of the *Leisure Suit Larry* series called *The Land of the Lounge Lizards.*

LEGEND OF KYRANDIA

Out of the dark, frozen wastes of a Norwegian fjord, a husky has arrived bearing a plea for help from Fanne Nakkerud. Unfortunately, I can do nothing about his/her(?) name, but I can consult the Shrine concerning the problem of the missing birthstones in the *Legend of Kyrandia.* Apparently, Fanne is having trouble locating the baubles to give to the altar.

The Shrine replies: As you are obviously aware, the land is full of sparkling gems which can be easily collected. They have a tendency to appear in the most common of places. It's a good point to remember to search places you have previously visited. If you place the correct gems on the altar plate they will magically light up a section of the altar. The one gem which I suspect you have not found is the one which is hidden in the bubbling spring. This is the Sun stone which you seek.



The cool and green forests of Kyrandia hide mounds of precious gems, but there is one jewel which can be a really difficult to find. Have you found all of your elusive birthstones?

CURSE OF ENCHANTIA



The cunning puzzles contained within the *Curse of Enchantia* continue to plague the minds of weary adventurers. The Shrine has a few solutions for you if you are getting desperate.

I have received two queries regarding the *Curse of Enchantia* which have touched my heart. Out of the Medway towns in Kent, Damien Gregory's sobs have been loud enough to be heard in the Troll's Head Inn. Deep in the caverns, Damien cannot find out how to reach the magnet which is lying on a shelf high above his head. The second call comes from Waseem Aslam from Rochdale who has made a lot more progress with this cunning adventure, but has finally come to a halt in the graveyard. Waseem has found the spade, plate, cross, symbols and a vacuum cleaner, but being a greedy adventurer he still wants more. A piece of garlic bread is the object he seeks before he deals with the guy with the sharp pointed teeth and the bat cloak.

The Shrine replies: The solution to the magnet problem concerns the plank and the boulder. By placing the plank over the boulder you will have made a see-saw. If you stand on one end and throw the computer at the other end you will catapult yourself up onto the ledge. To deal with the vampires in the graveyard you should carry out the following moves. Having entered the graveyard, Look, Pick-up bone. Fight with bone. After climbing out of the grave, go right and the vampire will appear. Move quickly left and the vampire will fall into the grave. Pick-up spade and then go right. The vampire will appear, so go behind him and fight with spade. Go right and stand before the next vampire which appears before the gravestone. Push/Pull the gravestone to scare him away. Go right and pick-up symbols. Go right behind the tree and pick up cross. Go right and pick-up coin. Go to the gates at the far-right and pick-up the vacuum cleaner. Return to the grave you first appeared from and there you will see the bread and garlic. Pick this up and go right until you meet a vampire. This time fight with cross, then go to the gates at the far right. A vampire will appear behind a gravestone. Come up behind him and fight with symbols. Once you have given him a good thrashing he will open the gates just to get rid of you.

WRITE BACK

If you have a problem, a notice for the Board, or perhaps you have a piece of scandal which you wish to whisper in the Inn, write to Tony Gill at: The Troll's Head Inn, CU Amiga, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

LEGEND

An intriguing letter arrived from Peter Frederick of Coleford who claims that he has uncovered a secret riddle which would give him unlimited power in Mindscape's game *Legend*. The riddle goes like this: There was a Runemaster from TAG, who kept all his runes in a bag. He added ONE for Knowledge Two for Wealth and Power And GOD for ability beyond belief. Even with this precious secret, Peter has been unable to make the game yield up its secret. I had never heard of this information and was intrigued by the strange words.

The Shrine replies: Well, I have good news and bad news concerning this question. The name of the game's writer is Tag, so that explains the first unknown. The good news is that the riddle means that you can go to the game's Option screen and select Runemaster. Now you have the opportunity to use the Rename selection. If you choose the Name TAGONE your character will now have lots of gold. If you rename to TAGTWO he will be able to access places that are normally inaccessible. If you rename to TAGGOD, he will become all-powerful, invulnerable to monsters, and be able to shoot open locked doors. And what is the bad news? This option only works on the PC version. Ah well, I never promised you a Rose Garden. One piece of more useful information I can give you is that a certain *Legend*-eer called: Phil 'The Berserker' Noonan, 60 Kilncroft , Brookvale, Runcorn WA7 6BH has written to say that he has a large repertoire of spellcasts which he thinks are pretty clever and he would like to correspond with anyone who is having difficulty with this game. He is personally having trouble in the stinking sewers of Balanhelm searching for a lock which will fit his key, or even better searching for a key to fit all the locks on the doors he can't open. He has plumbed the five levels of Fagranc and scaled the Dark Tower. Any offers?

LORD OF THE RINGS

Carried on a cold breeze from the dark mountains of Wales comes a faint cry for help from Jake Lester in Clwyd. Jake is outside the castle Dol Guldur in the *Lord of the Rings*, wishing fervently that he was inside. He also wishes me to ask the Shrine how he can make the Gollum do his bidding.

The Shrine replies: It is impossible to enter the castle from the outside when the main gate is locked. (Well so much for that!) However there are two secret entrances. One is via the secret passage in the stone near the forest maze and the other is the secret entrance in the Hill of High Sorcery. Somewhere in the Hill of High Sorcery you will receive a message that you can feel hot air coming from the east. At this point you should use a Perception skill and this will get you into the castle's cellars. Regarding the Gollum of Mirkwood I have this advice. As soon as you encounter this treacherous beast use the word !Orome to freeze him in one spot. You now will be able to recruit him and he will join your party. As you journey on past the southern boughs of Mirkwood, the Gollum will show you the entrance to the forest maze. To gain entry to the secret entrance to the castle you must get as close as possible to the northwest corner of the stone in the forest maze.

MIGHT AND MAGIC II

No sooner had one message arrived from Wales than another bearing the seal of the Red Dragon plopped onto the welcome mat of the Inn. David Toulalan from Clwyd found that he could suc-



The training grounds of *Might and Magic II* are where your men can convert all those hard won experience points into new levels of strength. Pay your money and gain those stripes.

cessfully take the Elemental Orb from its pedestal in Dawns Cavern but now he is unable to leave with it as the orb won't let him get out.

The Shrine replies: It's problems like these which are sent to drive mortals mad, for the answer is really quite simple. The Orb won't allow 'you' to carry it out, but others may not have any problem. The answer is to give the Orb to a hireling then dismiss him. The hireling will leave carrying the Orb with no difficulty at all. All that is left for you to do is return to the inn where you hired him and recruit him again. Of course, if you hired him at the Troll's Head Inn you just may have a bit of a problem, for Tony Gill will almost certainly cheat him out of his treasure before you can arrive.

OPERATION STEALTH

A morse-code message from a wobble-board reveals that Benjamin Muir in Australia is stuck for a clue in *Operation Stealth*. Having passed



Fasten your safety harness as the Stealth Bomber takes of for a flight into adventure with Operation Stealth. Can you guide the secret agent through the wealth of security gates which protect this ultimate weapon against democracy?

through the dreaded rat-maze, tied up the guard, given the man water, and swapped the security stamps, Benjamin is at a loss as to how he can get up the elevator which is controlled by the fingerprint identifier.

The Shrine replies: As it's obvious that you will need to have a copy of someone else's fingerprints to activate the door control, you need to find something which would have a set of prints on them. If you return to the Guard's Shower Room you should be able to spot an empty glass in the sink. Grab the glass and then remove the tobacco from the blue-tipped cigarettes in your spy kit. This cunning paper can be used to 'lift' a copy of the prints from the glass and then be used to bypass the security door.

With these final words of wisdom the magical glow from the Shrine fades and dies. Outside of the inn the dawn is breaking over the surrounding hills signalling that another night of danger is coming to an end. Rouse yourself, gird up your breastplates, sluice your ale-sodden heads in the horse trough outside and prepare yourself for another day of adventure.

Panasonic *Quiet* Colour Printing

We researched the colour printer market in great depth to find a colour printer good enough to cope with Amiga's powerful graphic output, yet at an affordable price. We found the perfect printer in the Panasonic KX-P2180 + KX-P2123 quiet printers.
We then considered that if you were going to buy a Panasonic printer, you would probably need a quality word processing package to use with it. We found that too, in 'Wordworth', yet at a retail price of £129.99 we thought that might be a little too expensive on top of your printer purchase! So together with Panasonic we decided to give a copy of 'Wordworth' free with every Panasonic printer. How's that for added value?

Panasonic KX-P2180



The new Panasonic KX-P2180 9 pin quiet colour printer. Produces crisp clear text in mono or in 7 glorious colours with new quiet technology. The new KX-P2180 is typically 15dBA quieter in operation, than the competition.

- **Fast Printing Speeds** 192CPS Draft and 38 CPS NLQ
- **Colour Printing** 7 colour palette (blue, red, green, yellow, violet, magenta and black)
- **QuietPrinting** Super quiet 45-48dBA sound level (most matrix printers are typically in excess of 60dBA)
- **6 Resident Fonts** Over 6,100 type styles using Courier Prestige, Bold PS, Roman, Script and Sans Serif Fonts
- **3 Paper Paths** Paper handling from bottom, top and rear for total flexibility
- **1 Year Warranty** for total peace of mind.

INDI PRICE £199.99

***WORDWORTH COMPLETELY FREE! WITH PANASONIC QUIET PRINTERS** The writers choice. The ultimate word processor for AMIGA computers. Wordworth is undoubtedly the ultimate word/document processor for the full range of AMIGA computers. The graphical nature of WORDWORTH makes producing documents faster and easier, with the enhanced printing fonts (including full Panasonic KX P2180 and KX P2123 colour printing support), Collins spell checker and Thesaurus, no other word processor comes close. "Without doubt this is one of the best document processors for the AMIGA, Today." (Amiga Format).
NORMAL RRP £129.99 inc. vat

Panasonic KX-P2123



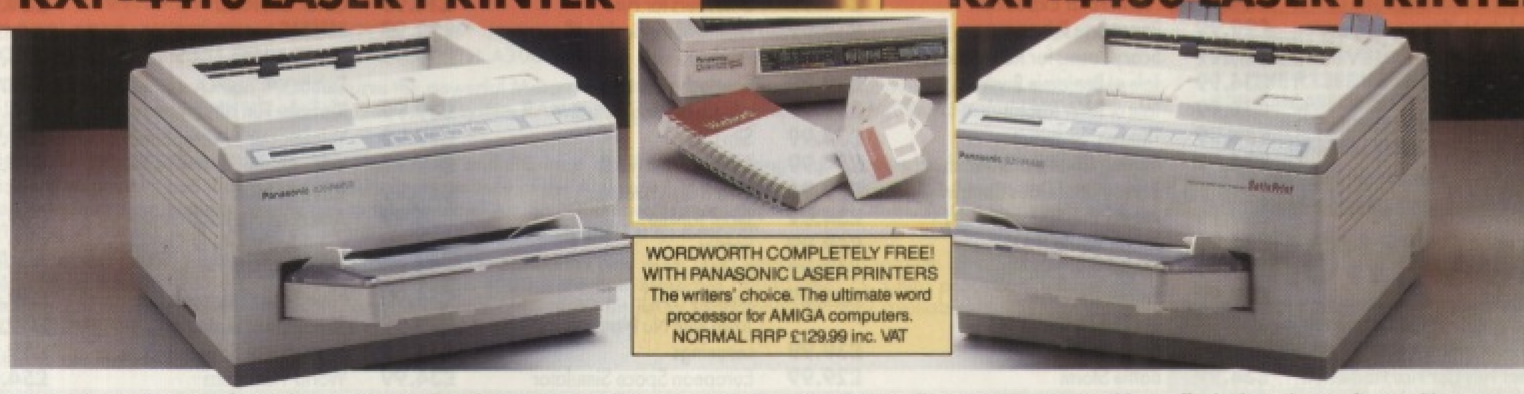
INDI PRICE £239.99

The new high performance Panasonic KX-P2123 24 pin. Quiet colour printer offers leading edge quiet printing technology at an affordable price.

- **Fast Printing Speeds** 192 CPS draft, 64 CPS LQ and 32 CP SLQ.
- **Colour Printing** 7 colour palette (blue, red, green, yellow, violet, magenta and black)
- **QuietPrinting** Super quiet 43.5-46kBA sound level (most matrix printers are typically in excess of 60dBA)
- **7 Resident Fonts** Over 152,000 type styles using Super LQ, Courier Prestige, Bold PS, Roman, Script and Sans Serif Fonts
- **24 PIN Diamond Printhead** High performance and high quality output
- **1 Year Warranty** for total peace of mind.

Panasonic LASER PRINTERS

KXP-4410 LASER PRINTER / KXP-4430 LASER PRINTER



LOW INTEREST CREDIT AVAILABLE PHONE FOR QUOTE

WORDWORTH COMPLETELY FREE! WITH PANASONIC LASER PRINTERS The writers' choice. The ultimate word processor for AMIGA computers. NORMAL RRP £129.99 inc. VAT

Once again Indi have joined together with Panasonic to offer all Amiga owners the most outstanding Laser Printer offer ever. We are now able to offer high quality, professional laser printing at very affordable prices. We are also giving away a free copy of Wordworth with every Panasonic Laser Printer purchased (RRP 129.99). Whether you're looking for a laser printer to handle word processing, DTP, presentation or complex graphics applications – the Panasonic range offers you the power to meet your requirements.

KXP-4410

- 5 pages per minute
- 28 resident fonts
- Optional 2nd input bin (total printer capacity 2×200 sheets)
- Low running costs
- Parallel interface
- Optional memory expansion to 4.5Mb (0.5Mb as standard)
- HP Laserjet II Emulation

RRP £992.00
INDI PRICE £499.99 inc. VAT
WORDWORTH COMPLETELY FREE WITH LASER PRINTERS

Panasonic 2 YEAR ON-SITE WARRANTY

KXP-4430

- Satinprint (optimum resolution technology)*
- 5 pages per minute
- HP Laserjet III Emulation, PCL 5
- 8 scalable fonts & 28 bitmap functions
- Optional 2nd input bin (total printer capacity 2×200 sheets)
- Optional memory expansion to 5.0Mb (1Mb as standard)

RRP £1286.00
INDI PRICE £799.99 inc. VAT
WORDWORTH COMPLETELY FREE WITH LASER PRINTERS

*(Satinprinters use optimum resolution technology to produce truly outstanding print quality. This software technique smooths away traditional jagged edges on curved characters and lines by varying the printed dot size and position).

Panasonic PRINTER ACCESSORIES



1) PANASONIC AUTOMATIC SHEET FEEDER
Automatic Sheet Feeder for KXP2180/KXP2123 holds 80 A4 sheets. **INDI PRICE £89.99**

2) PRINTER DUST COVER
Specially tailored quality dust cover for Panasonic KXP2180/KXP2123 printer. **INDI PRICE £8.99**

3) PRINTER STAND
2 piece printer stand. **INDI PRICE £9.99**

4) PAPER PACK
500 sheets quality A4 paper. **INDI PRICE £9.99**

5) PARALLEL PRINTER CABLE
To be used when connecting Amiga to Panasonic Printer. **INDI PRICE £8.99** (£5.99 if purchased with printer)

6) PANASONIC COLOUR RIBBON
Colour ribbon for KXP2180/KXP2123. **INDI PRICE £18.99**

7) PANASONIC BLACK RIBBON

SAVE ££££'s ON THE FOLLOWING ACCESSORY PACKS

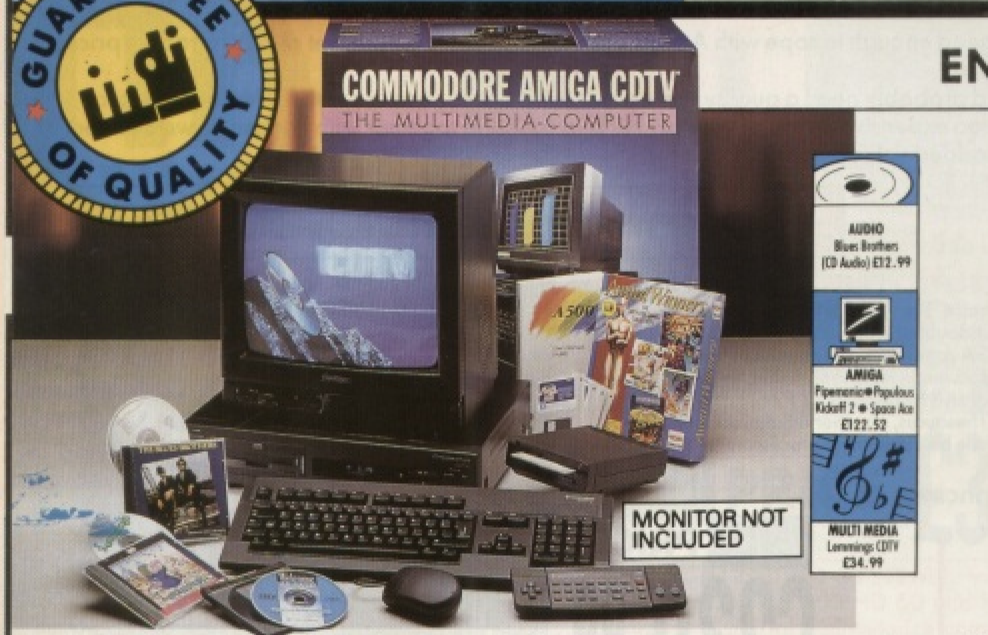
PACK 1
PANASONIC COLOUR RIBBON PACK
Contains 6 colour ribbons for KXP2180/KXP2123.
RRP £119.99 **INDI PRICE £89.99** SAVE £30.00!!!

PACK 2
PANASONIC RIBBON PACK
Contains 2 black and 4 colour ribbons for KXP2180/KXP2123. RRP £99.99 **INDI PRICE £69.99** SAVE £30.00!!!

PACK 3
PANASONIC DELUXE ACCESSORY PACK
Contents = Automatic Sheet Feeder, 2×black ribbons, 2×colour ribbons, 1×dust cover, 2 piece printer stand.
RRP £169.99 **INDI PRICE £139.99** SAVE £30.00!!!

AMIGA CDTV — THE MULTIMEDIA COMPUTER TOTAL HOME ENTERTAINMENT SYSTEM

GUARANTEE OF QUALITY — indi



The problem with any new product is that it always takes time for everyone to realise its full potential. CDTV is no exception and in our opinion everything we have read does a pretty poor job of explaining just what CDTV can do and why it is so exciting.

THE INDI GUIDE TO CDTV

IT'S A CD PLAYER – Yes, it will play all your Primal Scream, Pavarotti, Pink Floyd and any other CD you care to mention in superb high quality stereo, with remote infra red control.
IT'S AN AMIGA – Plug in the keyboard, switch on the external disk drive and the colossal range of inexpensive Amiga software can be used on your CDTV.
IT'S A MULTIMEDIA SYSTEM – Just imagine, stereo sound, images and text all on screen. It asks a question, you respond, it responds — truly interactive! Each CD disc holds hundreds of megabytes of data with instant optical access. The whole of Hutchinson's Encyclopedia fits onto 1 disc. This interactive system is a unique aid for Education, Business or Leisure. The future is here!

PACK CONTENTS AS STANDARD • Amiga CDTV Player • CDTV keyboard • CDTV 1411 3.5" Disc Drive • CDTV Infra red remote controller • CDTV wired mouse • CDTV Welcome Disc • Manuals • Fred Fish CDTV
INDI VALUE ADDED FREE • Lemmings CDTV (£34.99) • Blues Brothers (£12.99) • Pipemania, Populous, Kickoff 2, Space Ace (£122.52)

INDI VALUE ADDED FREE

INDI PRICE £469.99

CDTV CONNECTS DIRECTLY TO YOUR TV SET

AMIGA CDTV SOFTWARE

ARTS AND LEISURE
- Advanced Military Systems £29.99
- Women in Motion £29.99
- Guinness Disc of Records £34.99
- Animals in Motion £29.99
- Connoisseur Fine Arts £34.99
- Fruits & Vegetables £34.99
- Trees & Shrubs £34.99
- Garden Plants £34.99
- Indoor Plants £34.99

EDUCATION
- Fun School — Under 5's £24.99
- A Long Hard Day at the Ranch £34.99
- A Bun for Barney £29.99
- Cinderella £39.99
- Fun School for 5 to 7 £24.99
- Fun School for over 7's £24.99
- Heather Hits Her First Home Run £34.99
- LTV-English as a 2nd Language £34.99
- Mind Run £29.99
- Mud Puddle £34.99
- My Paint £29.99
- North Polar Expedition £49.99
- Paper Bag Princess £34.99
- Scary Poems for Rotten Kids £39.99
- Tale of Benjamin Bunny £39.99
- Tale of Peter Rabbit £39.99
- Thomas' Snowsuit £34.99
- Moving Gives Me Stomach Ache £34.99
- Barney Bear Goes Camping £29.99
- Asterix English for French I £34.99
- Japan World (PAL) £49.99
- NASA, the 25th Year £19.99
- Fractal Universe £34.99

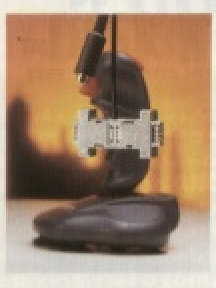
ENTERTAINMENT
- Battlechess £39.99
- Battle Storm £29.99
- Fred Fish (CD PD1) £19.99
- All Dogs to Heaven: Electric Crayon £34.99
- Ultimate Basketball £29.99
- Classic Board Games £34.99
- Dinosaurs for Hire £14.99
- Hound of the Baskervilles £29.99
- Psycho Killer £29.99
- Sherlock Holmes, Consulting Detective £39.99
- Sim City £29.99
- Trivial Pursuit (PAL) £49.99
- Wrath of the Demon £29.99
- Team Yankee £34.99
- Raffles £34.99
- Prehistorik £34.99
- Snoopy (PAL) £34.99
- Town with No Name £29.99
- Lemmings £34.99
- European Space Simulator £34.99
- Fantastic Voyage £34.99
- Global Chaos £29.99
- Turrican II £29.99
- Guy Spy £29.99
- Cover Girl Poker £24.99

MUSIC
- Music Maker £34.99
- Remix £29.99
- Karaoke Fun Hits I £14.99
- Voicemaster + Microphone £39.99
- Voice FX £19.99

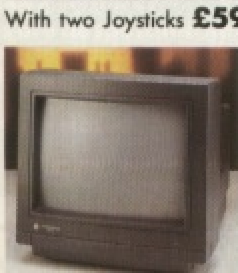
REFERENCE
- American Heritage Dictionary £49.99
- Complete Works of Shakespeare £29.99
- Illustrated Holy Bible £29.99
- New Basics Electronic Cookbook £39.99
- Timetable of Business £39.99
- Timetable of Science £39.99
- World Vista Atlas £54.99
- Dr. Wellman £54.99

prices include carriage

AMIGA CDTV ACCESSORIES



THE BRICK-ETTE Just plug in the Brick-ette and use any wired Amiga compatible joystick, mouse or trackball device on the Commodore CDTV. The built-in 8 bit Micro Processor gives the Brick-ette big smarts in a tiny package and makes it easy to use just plug into the remote port and it is ready to go with real time mouse or joystick movement on your CDTV. No loading of driver programs or software. No switches for mouse or joystick. Special settings (with mouse) allow you to blast away with three rapid fire modes & dual fire buttons. Comes complete with Python Micro Switched Joystick.
INDI EXCLUSIVE £49.99
With two Joysticks **£59.99**



BLACK 1084S MONITOR
At last the CDTV Monitor you have been waiting for. The original and best selling colour/stereo monitor from Commodore is now available in black to complement your CDTV.
INDI PRICE £189.99
(or £179.99 when purchased with CDTV Multi-Media pack)



If you are thinking of buying CDTV or already own onr you'll be pleased to know that INDI stock all CDTV accessories and software that are available from manufacturers. We believe in CDTV and we therefore continue to support this exciting product. You will always have a source of product for your CDTV from INDI.
L to R:
- CDTV Encore SCSI Controller + Internal Mount Kit **£109.99**
- CDTV Internal Genlock **£149.99**
- Black 1084S Colour Stereo Monitor **£189.99**
- (When purchased with CDTV Multi-Media Pack) **£179.99**
- CDTV Remote Mouse **£49.99**
- Scart TV/Monitor Lead (inc. Stereo Phono Lead) **£14.99**
- Megachip – 1Mb Upgrade ChipRAM Upgrade for CDTV **£159.99**
- CDTV External 3.5" Floppy Drive **£49.99**

AMIGA CDTV EXTERNAL HARD DISK DRIVE You've got the CDTV, you've got the keyboard and floppy disk drive – for a total computer solution all that's needed is an ultra-fast hard disk drive.
The CDTV-HD unit boasts a massive 65Mb of hard disk storage with lightning fast access times through its SCSI interface. The unit comes complete with Workbench 1.3 and all necessary cables.

INDI PRICE £269.99



SAVE £££'s on this offer

PROFESSIONAL AMIGA



The A1500 is the ultimate home computer for the whole family and is designed to cover every computing requirement.
INDI are able to offer you exclusive deals on this outstanding product in various configurations and bundles.
All configurations come complete with the following software and accessories:-

FEATURES:
- Fully functional keyboard with numeric pad separate from CPU
- Includes 2×3½" disk drives as standard with 5¼" Disk Bay.
- Integral memory and card expansion capabilities (most cost effective expansion route)
- Work bench 2.00 and Kickstart 2.04.

EXCLUSIVE!

CONTENTS:
- Keyboard, mouse, reference manual, Puzznic, Toki, Elf (Games), D Paint III (Graphics Package), Home Accounts, The Works (Platinum edition: Wordpro, Spreadsheet, Database) Joystick

AMIGA A1500 FEATURED (see photograph above) ● 52 Mb SCSI Hard Disk ● Pack now includes 1084ST Monitor & Panasonic KX-P2123 24 pin colour printer.

INCLUDED FREE Amiga Vision and Wordworth Worth £229.99

Other 1500 configs available at very competitive prices. Phone for details.

LOW INTEREST CREDIT AVAILABLE PHONE FOR QUOTE

£1159.99

24 BIT GRAPHIC SYSTEM



OPAL VISION 24 BIT GRAPHIC SYSTEM FOR THE AMIGA 1500/2000/3000/4000. If you have an Amiga (1500/2000/3000/4000) you must have OpalVision with the ability to turn your system into a tailor-made 24 bit workstation, complete with Genlock, Frame Grabber, Chroma Key, Flicker Fixer, Pip, True 24 bit Double Buffered Display, Video Switcher, Broadcast Resolution and of course the unique DVEs, the Opal is quite simply the only choice for any 24 bit all rounder who needs a system that will grow with your imagination and needs. Quite simply, it's a spectacular product. Contents: Opal Board, Opal Paint – 24 bit graphic creation tool, Opal presents – powerful presentation package, Opal Vision Hotkey – controls and manages OpalVision and Amiga Graphics, Opal Animate – animation software package, King of Karate – the world's first 24 bit graphics computer game. **A VERY SPECIAL OFFER** FREE IMAGINE 2.0 Software. For a limited period only, INDI direct are offering a very special OPALVISION bundle, that now includes a copy of IMAGINE 2.0 worth £299.99 absolutely free. Imagine represents the state-of-the-art in 3D image processing that is able to utilize the performance of the OPALVISION board and render images in full 24-Bit colour. Now you can have the very best 24-Bit painting software, and the very best in 3D redering software when you purchase OPALVISION. Hurry this is a limited promotion, while stocks last. **INDI PRICE £699.99 Inc VAT.**

COMMODORE 1960 MULTI-SYNC MONITOR A 14" high resolution monitor for use with A1500/A2000/A3000/A4000. **INDI PRICE £369.99** OR **£351.99** IF PURCHASED WITH A3000/A4000.

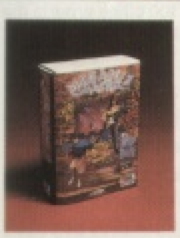
AMIGA 3000 25/52Mb The Amiga 3000 features the powerful Motorola 68030 processor running at 25Mhz. Complete with 52Mb SCSI Hard Drive (Single drive with no HD available) and 2Mb system RAM (6Mb Option Available). FREE AMIGA VISION SOFTWARE. **INDI PRICE £1229.99**

AMIGA 3000 – PC SYSTEM (386SX-25) The Amiga and PC hard drive system offering high performance PC386SX-25Mhz industry standard computing and the true multi-tasking performance of the Amiga, all in one box. Run the PC or the Amiga and transfer files between both operating systems. In addition to the standard Amiga 3000 specification, the Amiga 3000-PC system features 386SX processor running at 25Mhz with 1Mb of PC memory and DOS 5. **INDI PRICE £1449.99**

NEW! AMIGA 4000 040/120Mb The new flagship Amiga featuring the new AGA (AA) Graphics chip set with ultra high resolution and a pallette of 16.8 million colours. The heart of the Amiga 4000 is the new Motorola 68040 (Not EC Chip) processor running at a breathe taking 25Mhz. Complete with 120Mb hard drive and 6Mb of 32-Bit RAM (Additional Memory available). **INDI PRICE £2095.99** (240Mb HD version of above **product £2259.99)**

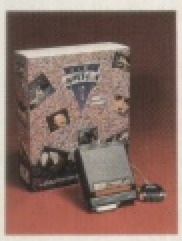
Note: Monitor is not included with any of these systems.

SOUND/VISION/ANIMATION
ROMBO PRODUCTS NOW AVAILABLE FROM INDI



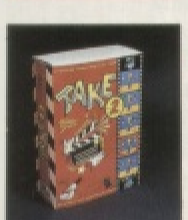
MEGAMIX is a low cost, high spec digital effects cartridge that plugs into the printer port of your Amiga. This allows you to sample or record stereo sound from almost any musical source. Special effects can be added in real time, perfect for the up and coming singer/musician/producer who wants that professional sound at home. You will find Megamix masters performance and its ease of use is unrivalled, just plug in and go...

INDI PRICE £29.99



VIDI AMIGA 12 is the ultimate low cost colour digitiser for your Amiga. There are no filters and no separate RGB Splitter. Colour images can be captured in less than a second, mono images are grabbed in real time. No other image capture system offers this level of specification for the price.
'The best value full colour digitiser on the market' Amiga Format

INDI PRICE £75.99



TAKE 2 is a must for computer artists and enthusiasts of any age. It will cater for both amateur and professional applications. So get the most out of your computer and open up your imagination to Take 2. As used in Rolf Harris Cartoon Club.

INDI PRICE £37.99

TEL 0543 419999 · FAX 0543 418079

indi DIRECT MAIL

AFTER SALES AND SPECIALIST SERVICE

All products are guaranteed for 12 months. Some products carry a 12 month at home service/repair guarantee (where indicated). In the unlikely event that any product purchased from INDI arrives at your home faulty, we will collect from your home and replace the product completely free of charge.

Products advertised represent a small sample of our instock range. A complete price list is available on request.

INDI HAS MOVED!

Now located at our parent company's H.Q., we are now able to offer even better all-round service, stock availability, problem solving and technical support.

LOW INTEREST CREDIT

Low interest credit is available on all orders of £250.00 and above. Subject to status. Same day response. Why not ring for a quote?

AS PART OF OUR POLICY OF CONTINUAL PRODUCT DEVELOPMENT AND REFINEMENT, WE RESERVE THE RIGHT TO CHANGE SPECIFICATIONS OF PRODUCTS ADVERTISED. PLEASE CONFIRM CURRENT SPECIFICATION AT THE TIME OF ORDERING.

PRICES ARE VALID FOR MONTH OF PUBLICATION ON

HOW TO ORDER

BY POST — simply fill in the coupon below. BY PHONE — ring 0543 419999 – phone lines open 9.00am-7.00pm Mon-Fri. 9.00am-4.30pm Sat. – where your call will be answered by one of our INDI sales team. After 7.00pm each day your call will be answered by answerphone. If you would like to place an order have all details at hand including Credit Card. The message will guide you through your order. All offers subject to availability. Prices correct at time of going to press. May we suggest you call before ordering.

SEND YOUR ORDER TO:
INDI DIRECT MAIL
1 RINGWAY IND. ESTATE,
EASTERN AVE,
LICHFIELD,
STAFFS WS13 7SF.

CU 0393

Please send..........................
Price .... + Delivery
I enclose cheque/PO for £.......
or charge my Access/Visa No.
....
Expiry date /
Signature ....
Send to Name.......................
Address ....
....
Daytime Tel........................

GET SERIOUS

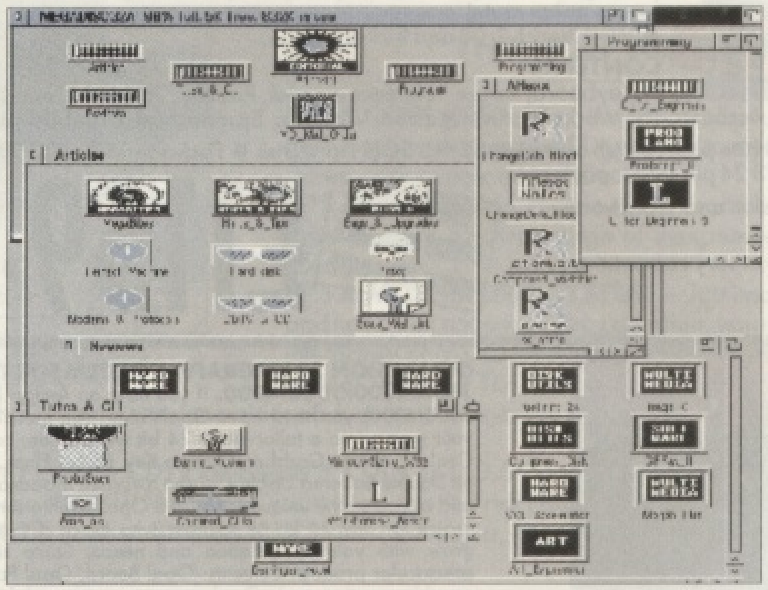
The section for all serious Amiga users is here again with another cornucopia of reviews. So, sit back, keep your eyes peeled and get a load of the stuff we've got for you...

CU AMIGA TOP RATED

The CU Amiga top rated accolade for non-games products scoring over 90%. They will definitely be worth the money and are likely to act as a benchmark for future releases.

MEGADISC

Jeff Walker throws loyalty out of the window and looks at an Amiga mag with a difference.



A small selection of the goods on offer in Megadisc issue 32.

Mentioning a rival magazine is a taboo practice in publishing, but as this one hails from Australia, comes on floppy disks and is more like a massive club newsletter, we thought we'd make an exception.

Launched five years ago, Megadisc was the brainchild of Tim Strachan, who has a long history in traditional magazine publishing and knows a lot about producing quality publications. Released approximately six times a year, it's up to issue 32 and has over 6,000 subscribers worldwide, mostly in Australia and New Zealand, where Megadisc is considered to be the main 'information resource' for the Amiga.

You may think that two 880K floppies is a lot to fill with articles, but amazingly each article is in a compressed format in order to pack in even more information. A special text viewer, MegaView, is used to present each article on the screen.

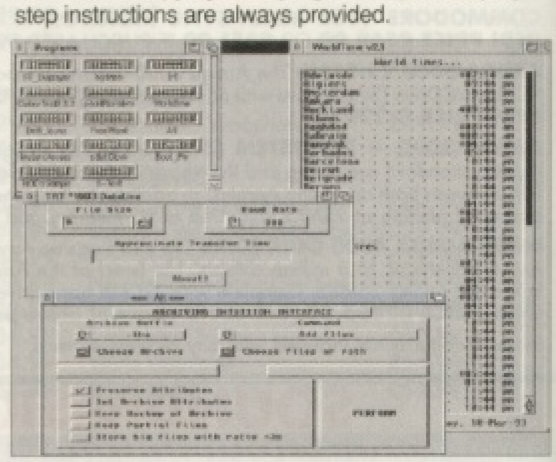
The subjects covered vary greatly, from articles for real beginners right up to sophisticated programming and hardware projects for experts. Each issue carries reviews of current software and hardware, comparisons between rival packages, tutorials on popular and some not-so-popular packages, hints and tips for all manner of things, bug reports and workarounds, programming in various languages, and even articles and series on some very specialised topics.

As well as articles there are some PD and shareware programs. Some of the most famous Amiga shareware authors are Australians – names like Jonathan Potter (JPDirUtil to name but one program, which was developed into the famous *Directory Opus*), Nic Wilson (SysInfo, Set040, AutoCLI, TrackDOS, NoClick...) and Chris Hames (DirWork, PCTask, the V MK virus killer, FSDirs...) – and titles from these authors tend to appear first on Megadisc, often before they even hit the bulletin boards, and way before they make the Fish disk library.

Being Australian, you might be tempted to think that a lot of what is written will not be relevant to us Poms, but that only really applies to the classified sales and bulletin board sections, and maybe the Aussie prices at the end of reviews. Even the hardware stuff is perfectly relevant as they use the same PAL system as we do.

There are no infantile boot blocks or intros to contend with, thank heavens. To use Megadisc you boot from your Workbench disk as normal and then insert disk A or B and simply click on icons. The great advantage of this is that it can be guaranteed that no matter which model of Amiga you own or which version of Workbench or Kickstart you have, from the ancient A1000 to the superfast A4000, Megadisc will work first time.

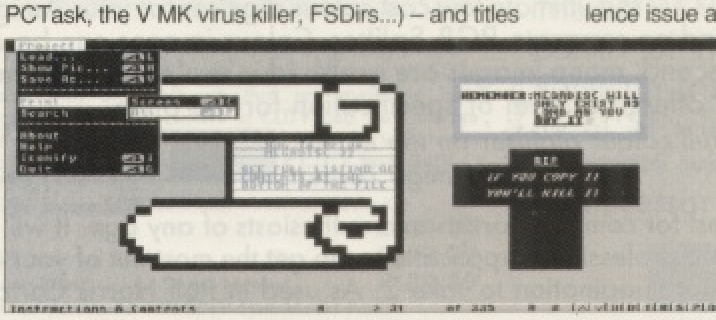
If there is anything complicated to do with reading an article or copying a PD program, explicit step-by-step instructions are always provided.



Three of the shareware programs on issue 32 – *WorldTime* lets you keep track of what time it is in almost 100 cities around the world; *DataLine* and *All* are specialised but useful tools for comms freaks.

The UK distributors for Megadisc, George Thompson Services, are so determined that every Amiga owner should at least experience Megadisc once that they are giving away a back issue absolutely free. Send a blank disk and a self-addressed, stamped envelope to the address at the end of this review and it'll come back packed with articles and programs.

To accomplish the quality and quantity of excellence issue after issue is a remarkable achievement – one wonders how it is managed in just 60 short days. And there's enough in each issue to keep you going for quite a while, maybe even until the next Megadisc is ready.



ANSI codes are used to enhance the articles when read from disk. The text viewer enables you to print the article if you prefer to read that way.

Contact: George Thompson Services, Bridgegate Centre, Martinfield, Welwyn Garden City, Herts AL7 1JG. TEL: 0707 391389. Price: £7.99.

92%

FLIGHTPATHS

Nothing at all to do with aeroplanes, Tony Horgan zooms in on a solution to one of DPaint's problems.

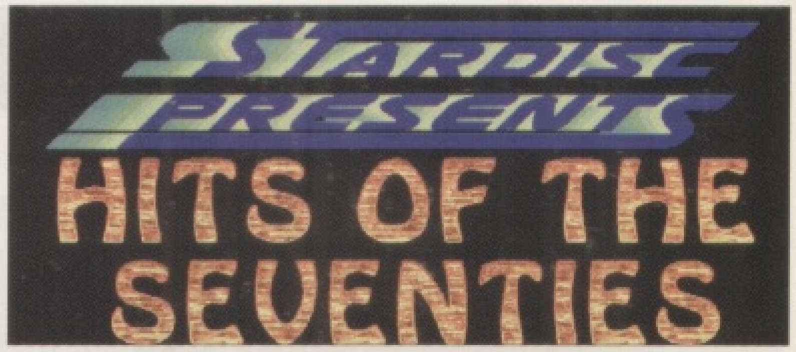
Of all the dedicated animation packages on the market, *Deluxe Paint IV* is surely the most popular tool among Amiga animators. Whereas most other animation systems have various sprinklings of drawing functions, most rely on pre-drawn backgrounds and brushes. That means using another piece of software to originate your graphics, and that can be very awkward (and memory consuming) if you have to jump back and forth between two programs.

The beauty of *DPaint* is that it's an art and animation system in one. Some of the animation features aren't as developed as those on the dedicated animators, but *DPaint's* got the massive advantage of being easy to use. Any ideas you have can be tested out instantly, so you don't end up wasting valuable time carefully crafting a sequence that could turn out to be a load of rubbish.

It's not all plain sailing, though. Some of the more advanced features can still be pretty daunting. Even when you've worked them out, actually getting the results you want is often far from easy. One such feature is the MOVE option, designed to help you get brushes flying around, in and out of the screen, without you having to paste down each frame separately. To get it working manually, you've got to input a whole load of angles and dimensions, which is a bit of a headache for most of us. To help you get around this problem, Meridian Software have released a range of pre-programmed 'flightpaths' for use with *DPaint*.

Flightpaths is a two-disk set: the first is filled with around 90 flightpaths, while the second is home to some fancy colour fonts, plus a few of the standard Workbench fonts. All the flightpaths are listed in the manual, with descriptions of what each one does. Fortunately, they've been saved with relevant file names, such as Bounce, Curve, Hit and Tumble, Roll and Spiral.

There are no brushes included, but you can use the fonts on the second disk to try them all out. Most of the flightpaths are well suited to presentations and video titling applications. The step-by-step walk-through demo works quite well, showing how easy it is to get titles (and any other graphics you fancy) spinning in and out of the screen. Also included with the disks is a tutorial/demonstration video, to get you up and running as quickly as possible. The video is available separately for £12.50 plus £1.50 p+p, which you get back if and when you decide to buy the whole package.



The fonts aren't exactly state of the art, but you can always use your own.



Tricks like this Star Wars scroll could take hours to perfect by hand. With *Flightpaths*, they're instantly available from the file requester.

Think of it as a kind of clip art, made up of animation paths instead of actual graphics. It's a good idea, and one that works well. It's a bit pricey, but if you're into animation or video titling, you'd do well to take a look.

Contact: Meridian Software, 9 Gurney Crescent, Littlethorpe, Leics. LE9 5JL. Tel: 0533 863501. Price: £49.95 plus £1.90 p+p.

77%

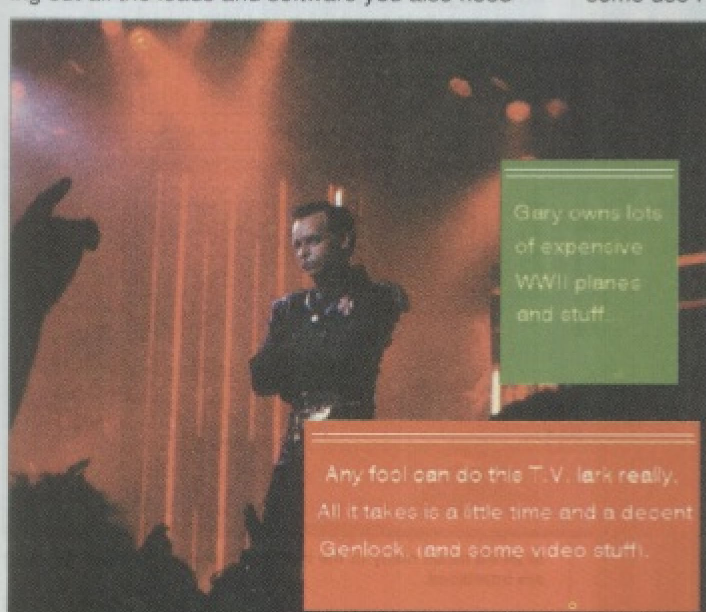
PRO GEN PACK

In an effort to set up his own video studio, John Kennedy grabs a genlock pack.

If you read the CU Amiga guide to Desktop Video you'll already know what an exciting device a genlock is. The ability to add computer graphics over the top of an incoming live video signal can revolutionise home video productions.

What you won't know until you try is that sorting out all the leads and software you also need can be a frustrating business. You need leads to carry the Amiga signal to the Genlock, leads to connect the Genlock to the video camera, and leads to carry the overlaid results to a video recorder.

Some video recorders use SCART sockets, some use RSC-style phono plugs but by definition must use the type of connectors that you don't have, and couldn't possibly get until after the weekend at the very earliest.



If you really want to grab a picture of Gary Numan, then you're probably quite sad. However, the Pro Gen Pack is an excellent package for all would-be producers.

One of the few dealers to have recognised this problem is Gordon Harwood Computers, who have put together an all-in-one genlocking solution. The Pro Gen Pack consists of the genlock itself, a large collection of leads and a decent paint package for titling – in short all you need to begin titling the same day.

The Genlock is the Pro Gen model, which despite its low price produces some very stable results. In fact, to get better images you would need to spend considerably more. In our tests, even pre-recorded video – notoriously difficult to genlock – produced worthwhile pictures.

Although Pro Gen has no external controls for altering levels and fades, as an added feature software control is possible by means of a special cable. When connected to the Amiga's parallel port, control over several operating modes is possible: Normal Background mode, Amiga only, Video only and two weird Foreground modes. The Foreground modes allow the live video to show through colours other than 0 and can produce some rather neat special effects. Unfortunately, the software is only menu driven and not ARexx controlled, which limits its usefulness.

The painting software provided is *Photon Paint 2*, which is perfect for creating titles. It's also perfect for creating more extravagant images – for example, you could paint a space-ship floating above a strange alien planet. My using colour 0 in the ship's windscreen, you can genlock live actors into the ship. With *Photon Paint's* animation facilities the backdrop could be moving – that is, if you have an older Amiga, for *Photon Paint's* animation doesn't appear to work properly on post-1.3 machines.

The most welcome part of the package from my point of view was the excellent set of cables. With the adapters supplied, any combination of SCART, Phono or BNC equipment can be mixed and matched. The only omission is the addition of a connector of the miniature sort that some camcorders use – luckily most camcorders come with an adaptor as standard.

The Pro Gen pack is a perfect way of getting to home video titling and special effects with the minimum of fuss.

Contact: Gordon Harwood Computers, New Street, Alfreton, Derbyshire DE5 7BP. Telephone: 0773 836781. Price: £64.95.

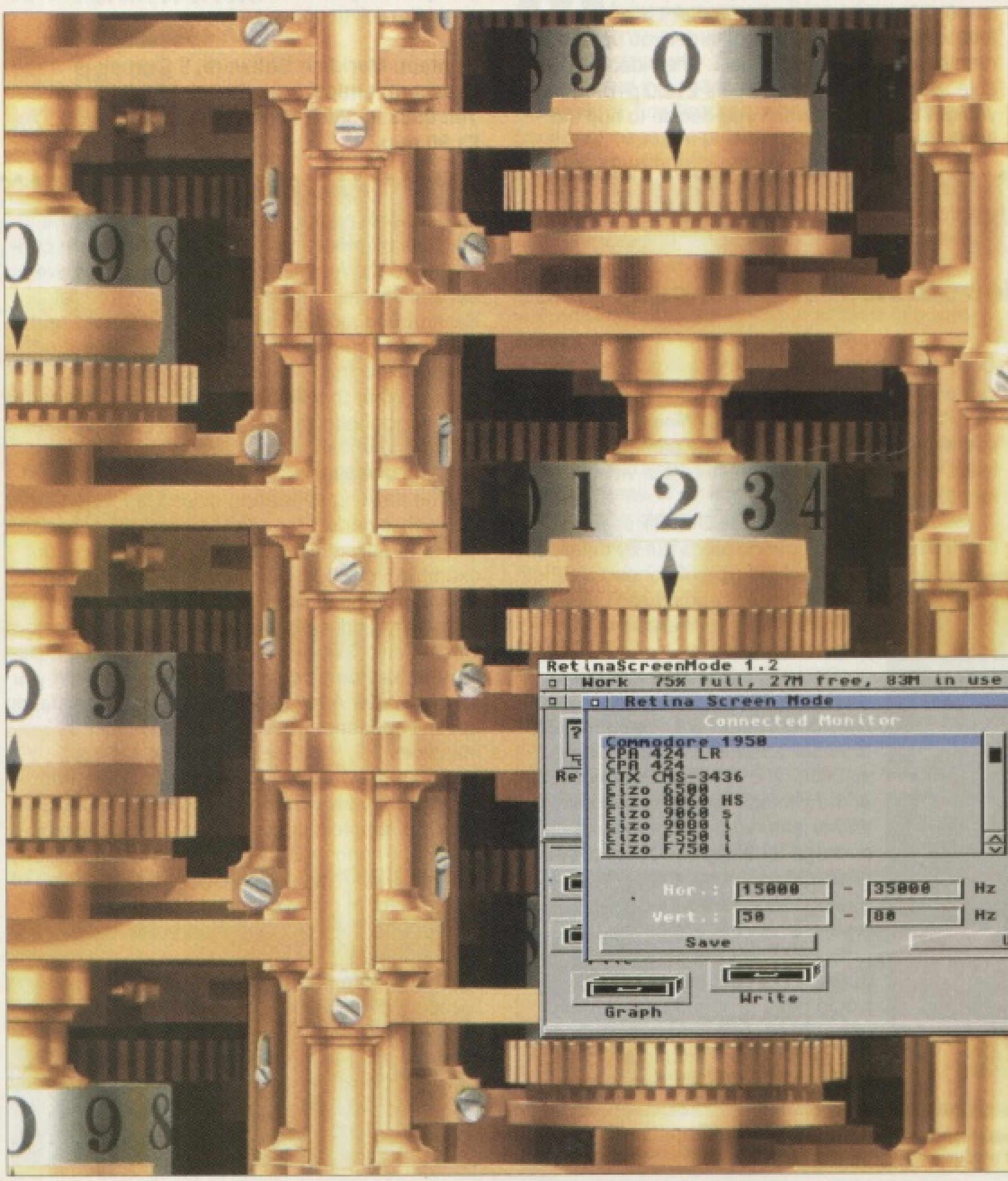
84%

Some programs, like *ProDraw*, can be forced to open a workbench window, and can therefore benefit from the increased resolution (although *ProDraw* did refuse to work in colour).



When is an accelerator not an accelerator? When it's a graphics card.

Retina



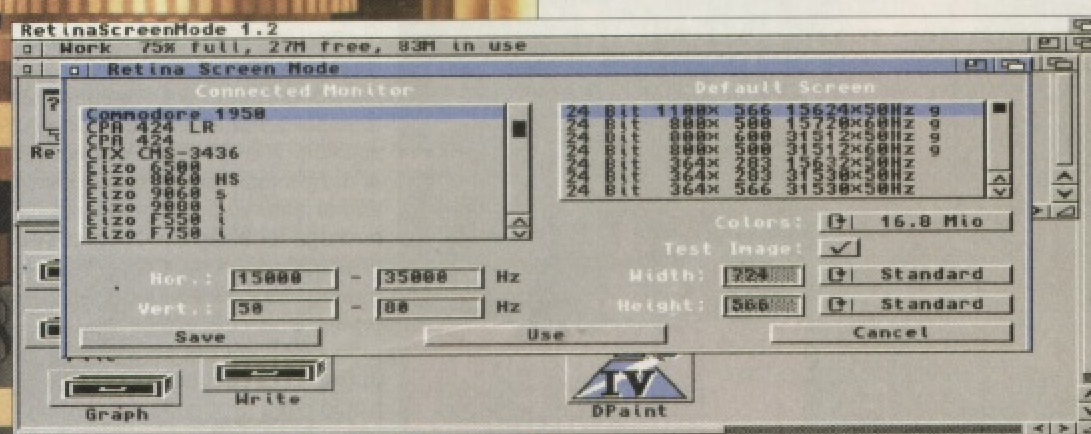
Left: This is getting towards the limits of the resolution of an image which can be displayed via Retina.

MacroSystem are becoming well-known in this country for producing some high quality hardware. When the makers of the excellent V-Lab come up with a high-res graphics card, it's time to sit up and pay attention.

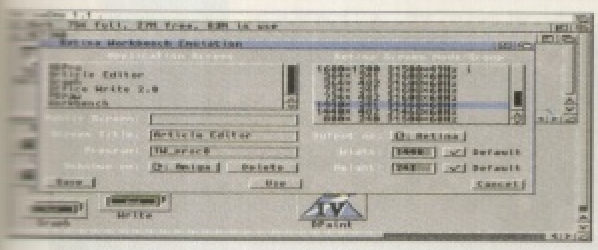
The Retina is actually a three-mode display, as it works in 8, 12 and 24-bit colour. What is the point of working in 8-bit colour if you already have AGA graphics? Well, the Retina isn't just a colour board, it also functions as a resolution enhancer and a flicker-fixer.

In fact, judging by the manual, the most important of these is the resolution enhancement. Using a retargetable graphics library and a special 'commodity' program, the Retina allows virtually all software to take advantage of an increased dot resolution.

The program keeps track of all the applications which attempt to open screens. By intercepting the graphics calls, a screen can be opened through the Retina card. Big deal, you may say – but the advantage is that, if the application can handle it, this resolution can be up to 2400 pixels wide and 1200 pixels deep, giving a sum total of 2.8 million pixels worth of display.



In 24-bit mode many of the high-resolution screens available are interlaced.



The emulation control allows you to specify display parameters for each application which opens a screen.

This works especially well in Workbench mode. By editing the ScreenMode preferences, simply select the Workbench screen size to be, say 1600x1200 instead of the default settings. 'No problem,' thinks the Amiga, 'it's obviously going to be one of those scrolling window jobs.' But when you run *RetinaEmu*, the screen appears in its full glory. The Workbench isn't confused, because when you apparently reach the edge of the screen the scrolling instructions are intercepted by the Retina software and simply ignored.

The result of this is that any application which can normally be run on the Workbench window will automatically be able to take advantage of the full screen resolution.

THE DOWNSIDE

Unfortunately, any programs which attempt to operate displays with more than 16 colours can run into trouble. *MorphPlus* suffers from this, as does *Personal Paint* and other graphic packages in the higher colour modes. They still run fine, but the picture is reduced to a one bitplane image (i.e. black and white). This is a bit of a drawback to most art packages, especially when editing colour palettes.

However, these packages would not usually derive much benefit from the enhanced resolution.

WHO NEEDS MORE BITS?

With the advent of the A1200 and the AGA chipset it is a valid question to ask whether we really need 24-bit graphics any more.

In tests on various guinea-pigs around CU Towers, many people were unable to identify the difference between a HAM8 image (262,000 colours) and a 24-bit one (16.8 million colours). In fact it is quite unusual to be able to get all the colours on one screen anyway.

Perhaps the AGA chipset has reduced the need for an add-on graphics adaptor, but it hasn't removed it entirely, especially when the card does more than simply add a few extra bitplanes to the image. As we have seen, Retina acts as a flicker-fixer, a resolution enhancer and a framebuffer, as well as increasing the colour depth of an image.

In the worlds of Video, DTP and graphic design there is always going to be a need for the full range of colours, in the average home there is probably not – but then again when was the last time you bought something for your computer that you really need?

Artwork can always be created in these packages in the normal way and then displayed on the Retina card later anyway.

Although software which opens a custom screen can also be forced onto the Retina card, they are often unable to take advantage of the extra resolution in that way. You can ask *Professional Draw* to run in 1600x800 mode if you like, but if you don't set it to run through Workbench all you will end up with is a tiny square in the top left-hand corner of the screen that the software is actually using. Retina doesn't 're-scale' the graphics of a program, it simply allows them to take advantage of extra space – if they choose not to there is little to be done.

NO MEMORY

By using up to 4Mb of onboard RAM the images themselves take up very little of the host machine's

VDPaint

***VDPaint* is bundled along with Retina. Although not terribly impressive, it is surprisingly fast.**



Bundled with the Retina card is *VDPaint*, an interesting paint package. In spite of its rather unfortunate title, it is really nothing to be ashamed of.

A rather interesting approach to the user interface means that all menu and tool selection is performed on a command square, which is activated by the right mouse button. Although this does give an unrestricted view of the artwork whilst in preparation, it is also more than a tad disconcerting.

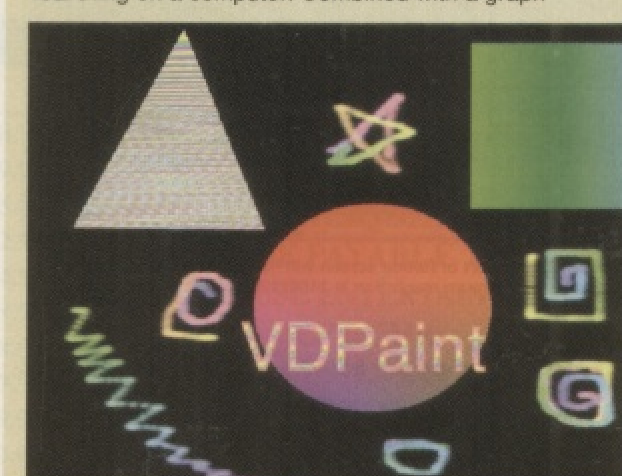
The features of the program are not quite up to the standard of packages such as *TVPaint*, but they are still slightly beyond the simple mucking about level. There are several ways of selecting colour ranges and, coupled with the brush transparencies and painting modes, this means a great deal of flexibility. Unfortunately it is also a rather laborious task to set up one of these effects.

The shining star is definitely the airbrush mode. With its feathered edges and definable spray it is perhaps the closest you can get to the real thing on a computer. Combined with a graphics tablet, any artist could run through the usual repertoire of effects with ease.

VDPaint does support the JPEG image format, which is almost de rigueur for high resolution image work on an Amiga these days. It's no use spending months on a stunning creation that would knock the tiles off a Michelangelo (that's the Renaissance artist, not the turtle) if you discover that your file is over 20Mb and there's no way it will fit on a disk. JPEG is a form of image compression which is particularly effective at crunching down realistic images (i.e. ones with lots of smooth shading) to realistic sizes. A 90 per cent reduction in file size is not unheard of.

The package also supports standard IFF and 24-bit IFF formats.

On the whole *VDPaint* is rather reminiscent of *DigiPaint3*. It has a vast potential, but a less than intuitive interface. It has great potential in some areas, but some simple effects are left unsupported. It doesn't give the impression of a finished piece of software, but behaves more like an early version which lacks features intended for release.



BACK TO V-LAB

Incorporated into the *VDPaint* control panel is a gadget for controlling V-Lab hardware if you should happen to own some. V-Lab is the most excellent video digitiser (reviewed in the August '92 and January '93 issues) ever to come out of Germany. It is also the best video digitiser ever to come from anywhere, and since it was also made by Macro System it is only reasonable that there is an interface for it. Grabs can be initiated from this interface and will automatically be displayed on the Retina once they are converted from YUV values.

***VD Paint* has excellent colour-cycling and airbrush modes – the fill functions could be a bit more flexible though.**

JARGON BUSTERS

● YUV – A term used to describe video signals which have three encoded components. Instead of RGB they are encoded as three different mixtures, the sole point being that it is easy to extract a monochrome image from them as well as a colour one.

● AGA – The new chip architecture in the A1200 and A400, which allows new displays with up to 256 colours (or 262,000 using HAM8 mode).

● TVPAINT – The most impressive 24-bit art package to date, originally developed for the ACS Harlequin card.

● JPEG – A standard file format for 24-bit photorealistic images. Enables a x5 reduction in file space with no lack of quality.

storage capacity. This is quite useful, because when you start running applications in 24-bit colour at a screen resolution of 1280x1024 pixels, you soon discover that your system isn't quite as well endowed as you thought it was.

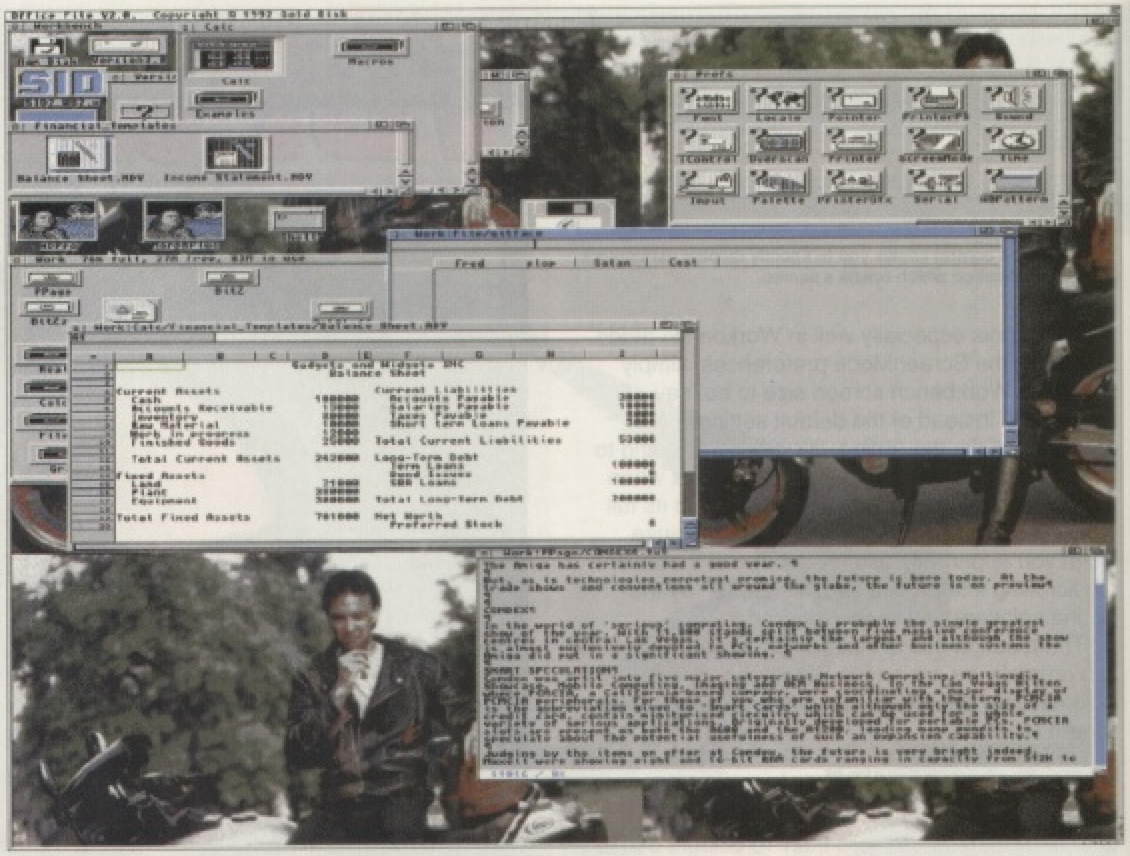
Another bonus is that the memory has a faster access time, allowing a decent rate of refresh on the Retina display. It also means that screens can be buffered – very useful for animation, because a second image can be built up in the buffer whilst the original is being displayed. The memory on board is arranged in ZIP packages and can make up configurations of 1, 2 or 4Mb. You should really have at least 2Mb, otherwise some of the display resolutions will not be available. Remember that a 24-bit 1024x512 image takes up nearly 2Mb...

SUPPORT

Retina comes with several support files. As well as the *RetinaEmu* and *RetinaScreenMode* programs, there is a display program for simply viewing IFF images with the card.

All IFF modes are supported, including HAM, HAM8 and 24-bit files. There is even support for the IFF-DEEP format (which can be loaded faster from disk) and the uncompressed Sunraster format. Images can be animated using Retina display, by giving a list of files to view. Double buffering is also supported to prevent unsightly glitches whilst the images are loaded.

As well as V-Lab support, there are a number of files which allow direct support for the Retina board from programs such as *ADPro* and *Imagemaster*. Even if your particular piece of software doesn't support the Retina directly, the card comes with a Harlequin library, which should theoretically allow it to work with any Harlequin compatible software.



The advantage of a huge workbench is obvious to anyone who has tried to multitask several programs at once and transfer data betwen them.

INSTALLATION

The Retina Card will fit happily on the Zorro bus of any Amiga that has one. It is a simple matter of locating a free slot and slipping the board in. The software uses a standard Install program, so all the libraries and utilities are properly located within about five minutes of starting up.

Each time an application which is unknown to the Retina is opened, the Retina software program will attempt to open up the relevant screen. This can then be changed by calling up the RetinaEmu program (using a hotkey if you wish) and editing where the screen is to appear (on the standard Amiga display or through the Retina) and what screen size to use. It's as simple as that.

CONCLUSION

The potential of the Retina board is really quite staggering. In addition to being able to output 8, 12 and 24 bit graphics in a variety of resolutions it is also capable of enhancing existing software.
The effectiveness of this system may be slightly limited at the moment by the standard software packages available, but as new versions of Workbench will come with retargetable graphics as standard, it will soon work with all major products.

The intelligent refresh of the display enables it to keep pace with all but the most demanding of tasks. The animation speed is not too hot, even when spooling direct from the RAM disk of an A4000, but this is more a limitation of modern life than any particular fault of the Retina.

The most amazing thing about the board is the astoundingly reasonable price. It is not a broadcast quality unit like the Harlequin, but it is more than adequate for most purposes.

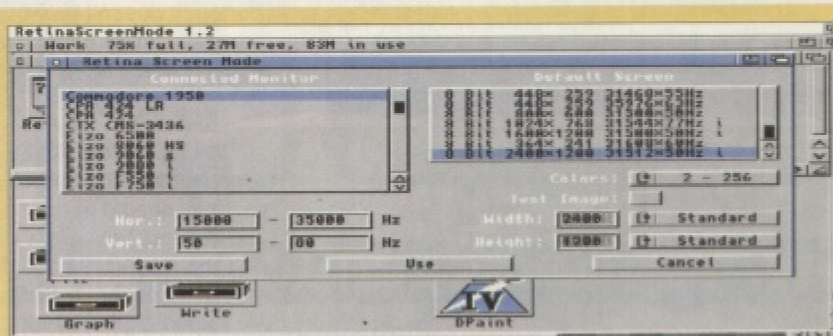
MONITORS

Retina comes with only one monitor connector, which takes the form of a VGA style D-plug. This means that you really ought to have a decent monitor to display your images on.

Most of the screen modes are available to virtually any type of VGA monitor, and many can even be displayed on a standard 1084 Amiga monitor, although a special cable will be required to convert the H-Sync and V-Sync signals into the composite signal required.

The higher resolution displays are interlaced, so if you want to work in very high resolution mode, it may be worth considering a special display which can stabilise the image.

Because some applications may not function perfectly under Retina, it is worth considering that you'll probably need two displays – a monitor for the Retina and another display for the normal Amiga picture.



The screen mode requestor defines what sort of Retina screen will be opened. The types available depend on your monitor, but the maximum resolution is 2400x1200 pixels in 8-bit mode.

AMIGA CENTRE SCOTLAND £345/1MB

A500 ✗ A500+ ✗ A600 ✗ A1200 ✗
A1500 ✓ A2000 ✓ A3000 ✓ A4000 ✓

AMIGA CENTRE SCOTLAND, HARLEQUIN HOUSE PEEBLESHIRE, SCOTLAND EH43 6AZ. TEL: 089 687 583

EASE OF USE ◆◆◆◆◆◆◆◆◆◆ 94%
It really is a simple matter of slotting in the card and running the install program.

VALUE FOR MONEY ◆◆◆◆◆◆◆◆◆◆ 98%
It's simply gobsmacking that you can get so much for so little

EFFECTIVENESS ◆◆◆◆◆◆◆◆◆◆ 86%
It isn't the fastest thing since sliced bread, but the images are sharp and clear.

FLEXIBILITY ◆◆◆◆◆◆◆◆◆◆ 82%
You do need to be running WB2, and it may not work with all applications.

INNOVATION ◆◆◆◆◆◆◆◆◆◆ 90%
The first workable graphics enhancer system we've seen.

“MacroSystem have redefined graphic excellence on the Amiga at an amazing price.”

OVERALL 91%

Blitz Ba

All the way from the land Down Under comes the sequel to one of the fastest programming languages ever created. John Kennedy holds onto his hat as he takes a look at Blitz Basic 2.

Programmers on the Amiga have a strange image. They are either seen as teenage European demo hackers with skin problems, or boring pony-tailed C boffins. Very few Amiga owners realise that Amiga programming is a remarkably easy and rewarding thing to do – all you need are the right tools.

The latest programming tool comes from Acid Software in the form of a BASIC compiler called Blitz Basic 2. Users with long memories may recall Blitz Basic 1, and how it failed to take off in any big way.

As a compiled language Blitz is remarkably fast, and as a re-work of BASIC, it's remarkably easy to use. Could this be the ultimate Amiga development system?

EDITOR

Before you can run your program, you'll need to either type it in or load it into Ted. Ted is the integral source code editor provided with Blitz, and it scores highly. It is lacking in only one or two areas, such as being able to split a line, existing line or being able to delete an empty line with the normal delete key.

The entire process of creating a program can be controlled from Ted, from code entry to compilation, running and debugging. One keypress will compile, run and list any errors present in the source file.

I was about to complain about the lack of 'folds' in the editor (sections of code which may be hidden when not in use – essential for longer files) when the rather clever label system caught my attention.

At any point in the source code, a label may be added by preceding its name with a full stop. This label is then displayed with any others on a list on the right hand side of the screen. Clicking on the label will move the cursor immediately to that section of code – very handy indeed.

The editor opens on a standard Workbench sized screen with a restrained choice of colours looking like most other Amiga text editors. Standard Intuition menus and requestors provide for loading and saving (although not via the ASL – Amiga Standard Library) and all the compiler options. It's all a lot different from AMOS, where slick and colourful effects are the order of the day.

Although an ARexx library means Blitz programs can converse with other Amiga programs, the editor cannot. This is not really a problem, as if you really want to use your own editor (for example, *Cygnus Ed* or *TurboText*) the automatic tokenisation of control words can be switched on and off to allow normal ASCII files to be used.

JARGON BUSTERS

• *Intuition* – The Amiga Wimp system which controls features such as menus and windows. These are the features which make an Amiga program instantly recognisable.
• *Libraries* – These are compiled sections of code which provide routines for your main program. The Amiga relies heavily on libraries for nearly all its applications.

JARGON BUSTERS

AMOS VS. BLITZ

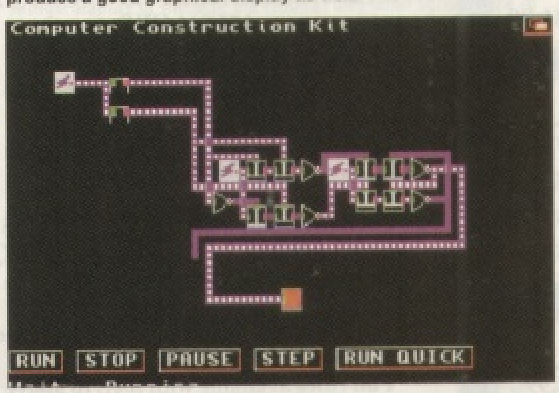
Blitz Basic is going to be constantly compared to AMOS, the development system produced by Europress Software. AMOS is an interpreted language (although a compiler is an optional extra) which has attained cult status. I had lunch with the creator – Francois Lionet once, but unfortunately I can only remember the rather excellent lasagne and the first few pints before it all became a haze (the dangers of company paid lunches). As far as I could tell, he was an earnest chap but felt that he could do things better than Commodore.

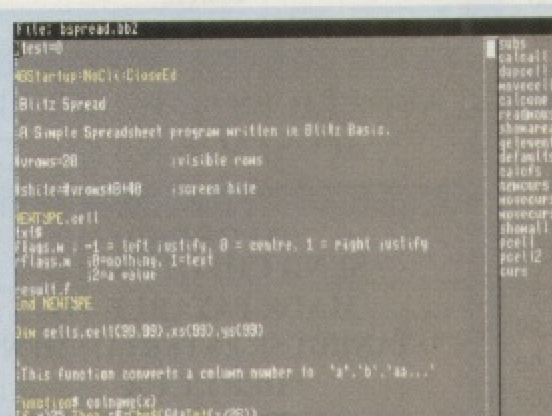
As a result, a program written in AMOS immediately stands out as being written in AMOS. The program has a certain feel that cannot be shaken off. Even the new AMOS Professional comes with its own version of Intuition to provide windows, menus and so on – which all look as though they came supplied with AMOS Professional.

By contrast, Blitz Basic is a considerably more Amiga-friendly program. Writing programs which actually use Intuition is simple and, in fact, any standard Amiga library can be used. A finished Blitz program is an Amiga program, not an AMOS program. By default it is a stand-alone program which requires no further compilation or run-time libraries.

To appeal to the more dedicated Amiga programmers, a special mode called Blitz Mode is provided which ditches the operation system and permits complete access to the custom chips as well as high speed hardware control methods. Thus even the more hack-hungry coder is catered for, in a way in which AMOS owners cannot even dream about.

This example models simple digital circuits. Not only does Blitz allow such complicated little problems to be coded, but also to produce a good graphical display as well.





A typical programming session. Notice the labels on the right hand of the screen, ready to whizz you directly to any part of your code.

BASIC

Blitz Basic is obviously based on BASIC, that well known and oft maligned programming language. In the old days, computers came with BASIC built-in as it was such an integral part of the experience.

BASIC has its advantages, but also severe drawbacks. It is not a structured language (no matter how many GOSUBs and PROCedures are used), and it does not suit 'black box' programming design methodologies – both of which are important when a program of any size is being developed.

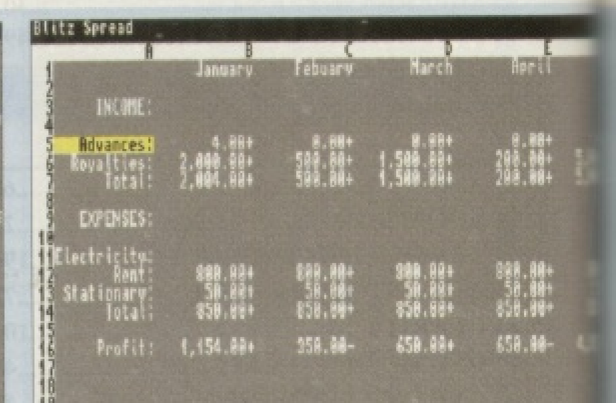
Blaming Blitz Basic for the shortcomings of BASIC is, of course, more than a little unfair, being rather like blaming cheese for being too cheesey. As the chances of a Blitz C or Blitz Pascal appearing are probably quite remote, the disadvantages of BASIC will simply have to be overshadowed by as the advantages of ease of use and the powerful extra commands provided by Blitz.

BASIC ENHANCEMENTS

As far as programming languages go, BASIC is one of the older varieties. It misses out on some of the more advanced data and control facilities supplied by the newer languages, and so the creators of Blitz have seen fit to create their own additions.

Line numbers are a thing of the past and, in fact, the dreaded GOTO statement has almost been eradicated, too. I spent some time looking through the example programs, and failed to find a single one. This was because of the excellent loop control structures and condition operations. While/Wend, If/EndIf, Select/Case/EndSelect and other coding options ensure your programs are as easy to read as possible. You can even define functions and procedures to accept and return arguments.

User defined datatypes – like structures in C – are a welcome addition, as are the built-in list operators. Perhaps there's life in the old dog yet!



Blitz Spread – one of the example programs written in Blitz Basic. This was the sort of program that launched the Apple2, so don't knock it.

asic2



Gore fest reigns supreme in the first demo supplied with Blitz Basic. The aim is simply to kill the zombie before they kill you. It's fast, and fun for few goes.

AMIGA ENHANCEMENTS

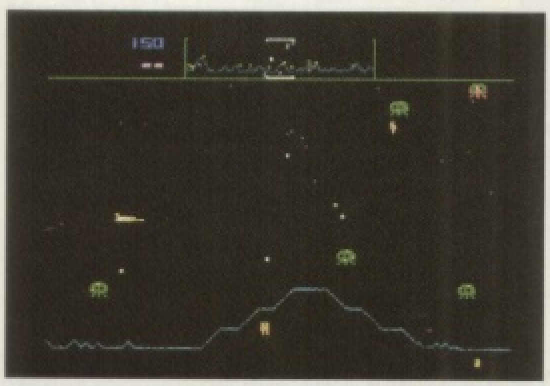
Of course, what makes Blitz Basic different from any other implementation are the huge number of Amiga-specific commands which allow intimate control over the hardware. Sprites, bobs (shapes), copper lists, sound effects, joystick and keyboard routines – they are all here in abundance. For example, loading an IFF image directly from disk and displaying it is handled with only one or two lines of BASIC.

When they're not all there – for example, a 3D library or *MED* module playback support – they can be added with the addition of extra libraries. Both these libraries were supplied as extras with the user newsletter, but I don't know if you'll get copies with your copy of Blitz Basic, so ask.

If that one missing routine is still driving you batty, adding your own by means of the integral in-line assembler is possible. Although hardly recommended for the beginner, adding machine code to your programs will wring every ounce of speed out of your Amiga and provide total low-level hardware support. If you can't do it with Blitz Basic, it can't be done.

Support for the AGA capabilities of the new Amigas (A1200, A4000 and A8000) is conspicuous by its absence. However the beauty of Blitz Basic is that support is very easy to add after the event, by means of the libraries. If there is something special you have in mind, you can bet that a library is either available, or shortly will be. If the worst comes to the worst, you can have a stab at writing your own – the User Guide shows you how. One of the newsletters I was supplied with included a serial driver, ideal for adding a two-player option to your latest game.

Wow! This is one of the best *Defender* clones I've seen in a long time. The only thing it lacks is the laser effect from your ship.



TOOLS

Designing Intuition screens (screens, windows, gadgets and so on) is such a common and tedious task that Blitz Basic comes with a point-and-click program that will do all the work for you. A click here, a drag there and the source code is automatically produced, saving hours of work. A similar set of programs will create maps for you, ideal for creating different levels for games.

The demonstration programs provided with Blitz Basic are nothing short of amazing. For starters, an arcade perfect version of *Defender* proves that speed is not an issue. A spreadsheet program will keep the application programmers happy, and for the more technically orientated a digital circuit simulator and 68000 assembler should destroy any doubts as to the power of the language.

Acid Software produce a newsletter called Blitz User. Each issue is packed with examples, bug reports/fixes and news. Not only that, but a supplied disk keeps your system up-to-date with the latest libraries and tools.

CONCLUSION

If you want to know exactly what makes the Amiga tick, without having to buy 15 manuals and learn assembler and C, there is no better way. You can write whatever sort of program you want, be it a demo, a game, or a piece of application software.

The only drawbacks are those of the Amiga and the BASIC language itself. If you want a program to do something bad enough, you'll find a way with Blitz Basic. It's ideal for beginners and experts alike, and what's more it produces true Amiga software. Get it. (No U.K. distributor has been fixed as yet, but we'll keep you informed as soon as a deal is signed.

AMIGA PROGRAMMING

I have a theory regarding home computers, and it's this: the more popular a particular computer, the smaller the percentage of people who actually program them.

It all started when the ZX81s and Spectrums were overshadowed with machines like the Commodore 64, which became one of the most successful 8-bit computers ever. The software was so good that most users didn't write a single line of code on them, being content instead to play the state of the art games. Now we have the Amiga, the Mac and the PC appearing in numbers too large to imagine. Nearly everyone uses one, but how many people do you know actually write programs? Not very many I'm sure.

Why should this be? Could it be that every possible application program is available and is perfect? Could it be that no one actually wants to write programs any more? I doubt it. The main reason is because the hardware has become so sophisticated that programming is really too much of a hassle. No one wants to spend months writing a program which will look awful compared to commercial products. These days computers are supplied ready to be used, not programmed.

But the Amiga is different, and so are Amiga users. They known their computer is one of the best available. It's a jack of all trades that can do anything the 'serious' machines can, as well as playing some of the best games written.

The Amiga is such a friendly machine, that people soon want to learn more about it. They want to use it their way, to run their programs. So for a change, they boot from the Workbench, open a Shell window, and pow! Suddenly everything gets so complicated that they give up immediately and load *Alien Breed Special Edition* again.

Thankfully, this sort of scenario is starting to change. From professional languages such as SAS/Lattice C to grown-up games programming systems, creating programs on the Amiga is becoming just another way of using it. Furthermore, the development systems available can produce software which looks and acts exactly like any commercial packages. Heck, most commercial packages are written with software that you buy off the shelf in your local retailer's shop.

So, why isn't everyone programming? Again it's all to do with the hardware. To provide all the high-resolution, mega-coloured, sprite controlled multitasking digitised sound effects you need complicated custom chips. On top of the chips you need a complicated operation system. To use all this, you need to be able to program in a language called C and own about four telephone book-sized technical manuals. It's bound to be off-putting, isn't it?

This still leaves a gap in the market for an easy-to-use programming environment. AMOS from Europress software was designed to be such a tool, and succeeded admirably. Blitz Basic was another early contender, and the new improved version looks like being the best way yet to start using your Amiga in the way you want.

ACID COMPUTING £TBA

A500 ✓ A500+ ✓ A600 ✓ A1200 ✓
A1500 ✓ A2000 ✓ A3000 ✓ A4000 ✓

Acid Software, 10St.Kevin's Arcade, Auckland 1, N.Zealand. 01064 93581658

EASE OF USE 81%
A perfect way to start programming. BASIC compiler, with many advanced features

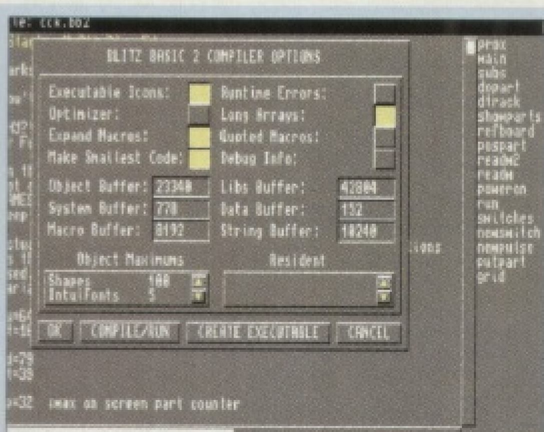
VALUE FOR MONEY 82%
Looks as though it could be a low cost alternative development system.

DOCUMENTATION 94%
Excellent, well informed and ideal for users of all abilities.

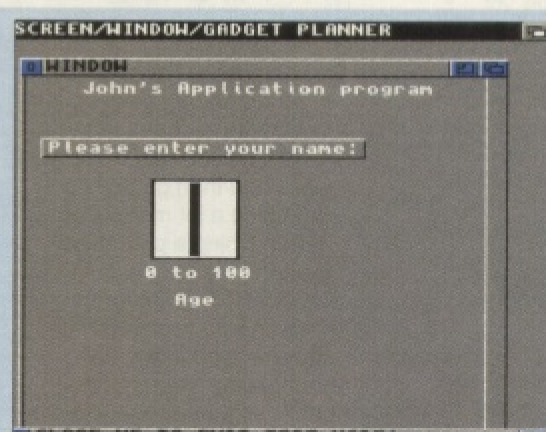
FLEXIBILITY 96%
Ideal for demos, games and serious applications.

> *Equally good for both beginners and experienced programmers.*

OVERALL 88%



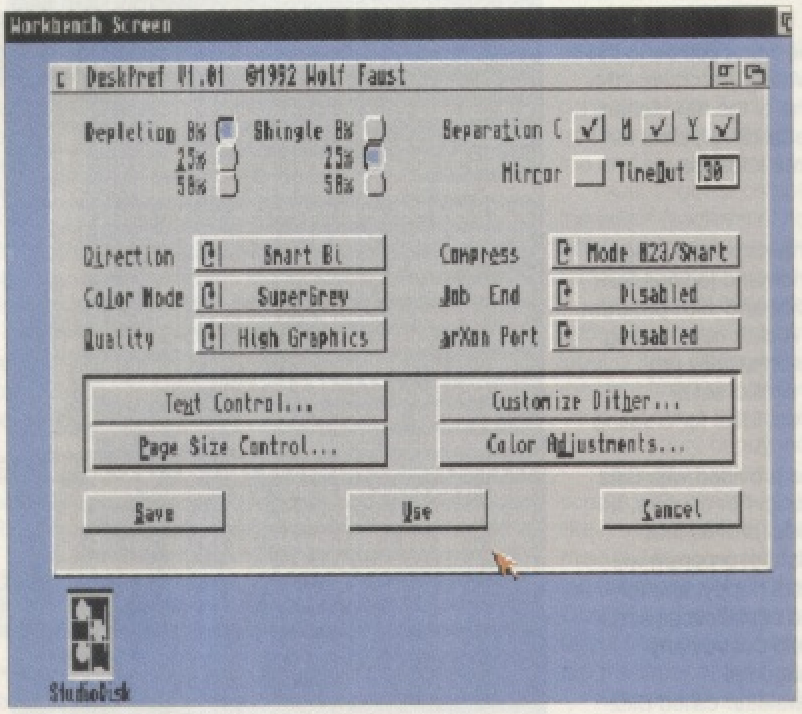
Some of the options provided by the compiler. Options such as Runtime error detection can be switched off after debugging for a further speed increase.



Using the supplied IntuiTools program, creating the source code necessary for exciting user interfaces like this one is as easy as using an art program.

Studio Printer Software

Not normally known as one to dither, John Kennedy wonders if he's found the ultimate printer utility.



One of the new printer driver preferences programs which *Studio* provides.

A printer can be the most infuriating peripheral you ever buy. One of the greatest annoyances is that a lot of sales assistants omit to inform you that you need the relevant printer driver to make the most of your hardware. This is a special piece of software which sits between the printer and the application package, converting Amiga graphics and control codes into a form the printer will understand.

Wolf Faust is a gentleman who made a big mistake – he publicly admitted that writing printer drivers wasn't really a big deal. He was immediately inundated with requests and the *Studio Printer Software* package is a result.

The package consists of two main parts: a new set of printer drivers and a special printing program. The printing program can work with any driver, although for best results the supplied drivers are recommended – they're essential for the output of 8 bit mono and 24 bit colour pictures.

DRIVERS

When installing the program – made easy with the now-standard Commodore Install program – you are quizzed on your type of printer. Decisions here will determine which driver and preference program get copied onto your system – dot matrix, laser or ink jet. Rather than make an overly complicated, the Wolf has wisely decided to separate the program into different parts for different printers.

Using the driver is simplicity itself – just click on the normal Printer preferences program and select the new driver. A new preference program will also appear in your Prefs drawer, and running it will show you how flexible your output options have suddenly become.

Almost every aspect of the output can be adjusted for optimum results, including image brightness, contrast, colour weighting and compensation and also Gamma correction, the ability to re-map the image brightness levels.

STUDIO PART TWO

The second half of the package is a standalone program dedicated to printing pictures, regardless of size, resolution or colour depth. The images are taken directly from disk, so even if the image you want to print is several megabytes, you'll still succeed in getting a picture. The size is up to you, from postage stamp to wall-filling poster.

The ability of *Studio's* drivers to work with 24 bit colour and 8 bit grey is a real improvement over the standard drivers, which offered only 16 grey levels and 4096 colours.

Of course, mono printers will display the image in shades of grey, but you can use a mono printer to create colour separations which a local print shop can re-combine into colour. Swapping the ribbons or cartridges of your printer with coloured ones will also generate colour images. The hard part is lining up the page perfectly for each pass.

Studio also has the option to spool the pictures to be printed, so you can set up your pages and then go and do something a lot more useful than watching a print head move from left to right. ARexx is supported, so integrating the program with your existing software is possible. For example, by means of the 'public screen' option, *Studio* can pop-up on the same screen as your DTP program and control printing from there.

If you're disappointed with the printed output you normally get from Amiga programs, you should get hold of *Studio* now.

The drivers are fast and efficient, and the control software beautifully makes use of the enhanced WB 2 environment and any faster processors fitted. Even the manual is one of the clearest I've seen. If you are thinking about getting an HP500C then let this help you decide.

PRINTERS SUPPORTED

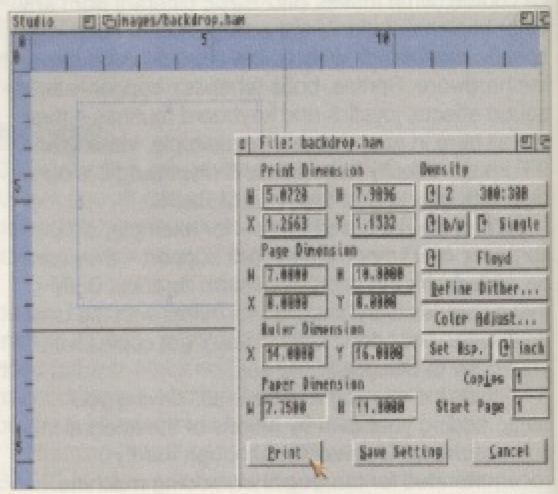
The special printer drivers supplied with *Studio* support the following printers:

Laser – LaserJet I, I+, 500, 2000, II, IIP, III, IIIsi, IIIP, IIID, IV and 4M. All PCL 3,4 and 5 compatibles. Star Laser 4, Laser 8, Ricoh LP1200. Brother HL4V, HL8V, HL8D Nec S60P, S62P, Panasonic KX-P4455.

Deskjets – HP DeskJet 500 Colour and Mono.

Dot Matrix – Most 24/48 printers, including those from: Oki, Citizen, Epson, Fujitsu, Panasonic, Nec and Star (including the SJ-48).

Unfortunately, a driver for the Canon BJ printers is not supplied, although the Studio program can still be used – albeit with reduced features – with other drivers.



Printing pictures of any size is a breeze with Studio. No matter how much memory you've got or how big the result, your Amiga can do it.

JAM £49.99

A500 ✗	A500+ ✓	A600 ✓	A1200 ✓
A1500 ✗	A2000 ✗	A3000 ✗	A4000 ✓

JAM, 75 GREATFIELDS DRIVE, UXBRIDGE, UB8 3QN. TEL: 0895 274449

EASE OF USE 82%
Printers are usually nothing but hassle, but installing and using Studio was the easiest thing I did all day.

VALUE FOR MONEY 81%
Large amounts of quality for small amounts of cash. I approve.

EFFECTIVENESS 93%
Although the results depend on the printer used, with Studio you can be sure you're making the most of what you've got.

FLEXIBILITY 80%
Requires at least 1Mb and Workbench 2.0 or better.

INNOVATION 82%
It's not the first, but it's definitely the cheapest.

"You need this software if you own a printer"

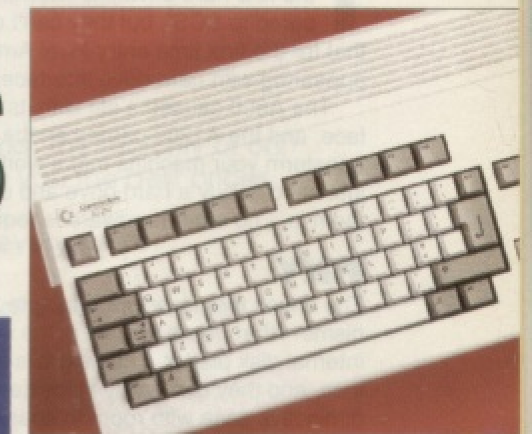
OVERALL 85%


FREE! ZOOL SOFTWARE PACK
WITH THE AMIGA 500, 600 or 1200 FROM SILICA
PLUS!
GFA BASIC v3.5*
&
PHOTON PAINT 2*
*Not with A500 Standalone
ZOOL PACK:
ZOOL £25.99
Platform title of the year
STRIKER £25.99
Soccer simulation
PINBALL DREAMS... £25.99
Pinball simulation
TRANSWRITE £49.95
Word processor
PLUS!
GFA BASIC v3.5* £50.00
PHOTON PAINT 2* ... £89.95
£267.87
*Not with A500 Standalone
THE Software Pack of the Year FREE with every Amiga 500, 600 or 1200 purchased at normal Silica prices.
ZOOL - "Knocks the socks off Sonic." - 97% - Amiga Computing - Nov '92
STRIKER - "Footballer of the Year - and no mistake ..." - 94% - CU Amiga - June '92
PINBALL DREAMS - "It's quite simply superb" - 94% - AUI - Sept '92
TRANSWRITE - Premier word processor (UK) with 90K spell checker.
Plus, with every Cartoon Classics, A600 or A1200, we will give you Photon Paint 2 paint package and GFA Basic programming language. A total of over £265 worth of FREE GIFTS.
WORTH OVER £265
1Mb AMIGA 500PLUS
FOR £199!
WITH FREE! ZOOL SOFTWARE PACK:
• ZOOL
• PINBALL DREAMS
• TRANSWRITE
• STRIKER
WORTH OVER £127
We are pleased to offer the 1Mb RAM Amiga 500PLUS Standalone for only £199, the lowest EVER price for an Amiga! PLUS! When you buy it from Silica we will give you a FREE ZOOL PACK - worth over £125!
BUILT-IN 18-KEY NUMERIC KEYPAD
1Mb Amiga 500PLUS + ZOOL PACK
£199
INCLUDING VAT - AMC 0500
2Mb RAM VERSION A500PLUS + ZOOL PACK
£229
AMC 0500 + RAM 0592
£100 OFF RRP! £50 OF VOUCHERS! FREE SIM CITY
CDTV ADD-ON FOR THE AMIGA 500
• Enables your Amiga to run CDTV software
• Plays normal audio CD discs
• Storage capacity equal to 600 floppy disks
• Internal RAM expansion option (Coming Soon)
• Internal hard drive option (Coming Soon)
• Transfer time 153Kb/second
• Compatible with CD + G and CD + MIDI formats
• Compatible with CD-ROM industry standard ISO9660
• Comes with CDPD collection + Sim City FREE from Silica
FREE! FROM SILICA with the A570 SIM CITY ENHANCED CD VERSION £50 of CDTV SOFTWARE VOUCHERS WORTH NEARLY £80
CDTV works with Amiga 500 Plus machines but older Amiga 500's require an internal modification and upgrade. This upgrade enables your 512K RAM expansion to be included with the on board memory to provide the 1Mb of CHIP RAM needed to allow all CDTV software to work. Simply return your machine and payment of £29.95 quoting REA 1000. This price assumes you already have a 1Mb machine by having an extra 512K RAM expansion in your trapdoor. If you do not you should add either £18.95 (RAM 0505) for a 512K RAM board without clock or £23.95 (RAM 0510) for a 512K RAM board with clock.
£249
Ref: CCD 0588
1Mb RAM AMIGA 500PLUS
CARTOON CLASSICS
PACK INCLUDES:
• 1Mb AMIGA 500 PLUS £299.99
• BUILT-IN 1Mb DRIVE ..... FREE
• A520 TV MODULATOR ..... FREE
• THE SIMPSONS £24.99
• CAPTAIN PLANET £25.99
• LEMMINGS £25.99
• DELUXE PAINT III £79.99
PLUS! FREE FROM SILICA:
• ZOOL PACK £127.92
• PHOTON PAINT v2.0 ..... £89.95
• GFA BASIC v3.5 ..... £50.00
PACK VALUE: £724.82
PACK SAVING: £495.82
SILICA PRICE: £229.00
A500 PLUS MODEL
FREE! ZOOL PACK + MORE! - SEE ABOVE
2Mb RAM VERSION £259 AMC 0592 + RAM 0592
RRP £299 £229
INCLUDING VAT - AMC 0592
1Mb RAM AMIGA 600
WILD, WEIRD & WICKED PACK
SAVE £50!
2Mb RAM OPTION SEE BELOW
FREE! ZOOL PACK + MORE! - SEE ABOVE
• 1Mb A600 + Mouse, 3½" Drive, TV Modulator, Smart Card Slot £299.99
• DELUXE PAINT III - Graphics & Animation £79.99
• MICROPROSE GRAND PRIX - Racing Sim £34.99
• SILLY PUTTY - Pliable Arcade Game £25.99
• PUSH OVER - Game of Puzzles £25.99
• FREE From Silica (see top left) £267.87
Total Pack Value £734.82
Less Pack Saving £435.82
Silica Price £299.00
1 YEAR AT HOME WARRANTY
NORMAL RRP £399 £299
INC VAT Ref: AMC 0649
2Mb RAM £329 AMC 0649 RAM 0570
1Mb RAM AMIGA 600HD
EPIC HARD DRIVE PACK
SAVE £100!
2Mb RAM OPTION SEE BELOW
WITH 20MB HARD DRIVE
FREE! ZOOL PACK + MORE! - SEE ABOVE
• 1Mb A600 + Mouse, 3½" Drive, TV Modulator, Smart Card Slot £299.99
• 20MB HARD DISK £199.00
• EPIC - A Sci-fi Adventure £29.99
• ROME - Role Playing Adventure £25.99
• MYTH - Stop the Spread of Evil £19.99
• TRIVIAL PURSUIT - Popular Quiz £29.99
• FREE From Silica (see top left) £267.87
Total Pack Value £872.82
Less Pack Saving £473.82
Silica Price £399.00
1 YEAR AT HOME WARRANTY
NORMAL RRP £499 £399
INC VAT Ref: AMC 0799
40Mb Hard Drive £449 inc VAT Ref: AMC0899
2Mb RAM Option Add £30 + RAM 0570
2Mb RAM AMIGA 1200
COMIC RELIEF
FREE! SLEEPWALKER SOFTWARE WORTH £25.99
LIMITED OFFER
FREE! ZOOL PACK + MORE! - SEE ABOVE
INCLUDES 2Mb RAM AND BUILT-IN 18 KEY NUMERIC KEYPAD
1 YEAR AT HOME WARRANTY
• 68020EC Processor
• 14.19MHz Clock Speed
• 32-bit Architecture
• 2Mb Chip RAM Standard
• Amiga DOS v3.0
• AA Chip Set for Enhanced Graphics
• 16 Million Colours
• 2-256,000 Colours on Screen
• 1 x 32-Bit CPU/RAM Expansion Slot
• PCMCIA Smart Card Slot takes 512K - 4Mb PC Cards
• Built-in TV Modulator
• 96 Key keyboard with Numeric Keypad
• 2½" Internal Hard Drive Optional Extra
• 1 Year On-site Maintenance
NEW PACK WITH £10 TO CHARITY
When you buy this new pack from Silica, a £10 donation will go to Comic Relief! The pack includes the hilarious new software title Sleepwalker.
£399
INC VAT - Ref: AMC 1212
85Mb HARD DRIVE FOR AMIGA 600/1200
FEATURES:
• Ultra fast Maxtor hard drive.
• 85Mb Capacity.
• Compact 2.5" mechanism.
• Low cost IDE technology.
• Internal fitting conserves desk space.
• GVP's FaaastPrep software + Manual.
• Complete fitting kit included.
• Fitting service available.
• Two year hard drive Warranty.
FITTING SERVICE
Because fitting ANY internal hard drive yourself will invalidate your Amiga's warranty, Silica offer a fitting service. Silica's trained engineers will professionally install the hard drive in your Amiga, keeping your Amiga warranty intact and then return the Amiga to you by free courier delivery.
MAXTOR 85Mb HARD DRIVE Inc GVP FITTING KIT
£299
INC VAT Ref: HAR 0785
Fitting £25+VAT = £29.38
ALL PRICES INCLUDE VAT - DELIVERY IS FREE OF CHARGE IN THE UK MAINLAND
190293-OPUS
SILICA SYSTEMS OFFER YOU
• FREE OVERNIGHT DELIVERY: On all hardware orders shipped in the UK mainland.
• TECHNICAL SUPPORT HELPLINE: Team of technical experts at your service.
• PRICE MATCH: We normally match competitors on a "Same product - Same price" basis.
• ESTABLISHED 14 YEARS: Proven track record in professional computer sales.
• £12 MILLION TURNOVER (with 60 staff): Solid, reliable and profitable.
• BUSINESS + EDUCATION + GOVERNMENT: Volume discounts available 081-308 0888.
• SHOWROOMS: Demonstration and training facilities at our London & Sidcup branches.
• THE FULL STOCK RANGE: All of your requirements from one supplier.
• FREE CATALOGUES: Will be mailed to you with offers + software and peripheral details.
• PAYMENT: Major credit cards, cash, cheque or monthly terms.
Before you decide when to buy your new Amiga computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Amiga, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".
MAIL ORDER HOTLINE 081-309 1111
SILICA SYSTEMS
MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0608
LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000
Opening Hours: Mon-Sat 9.30am-6.00pm No Late Night Opening Fax No: 071-323 4737
LONDON SHOP: Selfridges (Basement Arena), Oxford Street, London, W1A 1AB Tel: 071-629 1234
Opening Hours: Mon-Fri 9.30am-7.00pm (Sat close 6.30pm) Late Night: Thursday - 8pm Extension: 3914
SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday - 7pm Fax No: 081-309 0017
ESSEX SHOP: Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA Tel: 0702 468039
Opening Hours: Mon-Fri 9.30am-5.30pm (Sat 9.00am-6.00pm) No Late Night Opening Fax No: 0702 462363
To: Silica Systems, CMUSR-0493-104, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX
PLEASE SEND A 64 PAGE AMIGA COLOUR CATALOGUE
Mr/Mrs/Miss/Ms: .... Initials: .... Surname: ....
Company Name (if applicable): ....
Address: ....
Postcode: ....
Tel (Home): .... Tel (Work): ....
Which computer(s), if any, do you own? 104A
E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.


ISSUE 138
MAY 93
COMPUTER AND
CVG
VIDEO GAMES
ONLY £1.95
68.00 ASCH DM11.00 S$11.70 $5.95 6000L
SUPER NES
MEGADRIVE
AMIGA/PC
MEGA CD
NEO GEO
MASTER SYSTEM
NINTENDO
PC ENGINE
CDI
THE BIGGEST AND BEST GAMES MAG IN THE WOR
NEW LOOK!
164 PAGES
FREE
96 PAG
TIPS BOOK
FREE
STREETFIGHTE
CUT-OU
CHARACTERS
MORE REVIEWS THAN EVER BEFORE!
FREE! GIANT STAR FLIGHT STICKERS
STELLAR EXCLUSIVE! STAR WARS SEGA
STAR WARS
ON SALE 15TH APR
HAND-HELD GO! VIDEO GAMES
FREE!
PULL-OUT HAND-HELD MAGAZIN

A1200 Peripherals

If you have an A1200, chances are you are only using half its potential. John Kennedy checks out two of the very first A1200 peripherals.



MBX 1200

MBX1200 PRICE LIST

	14MHz	25MHz
0Mb	£139.95	£199.95
1Mb	£207.13	£267.13
2Mb	£266.89	£326.89
4Mb	£356.19	£416.19
8Mb	£559.90	£619.90

Once the novelty of using the excellent Workbench 3 environment has worn off and you start using your A1200 for some serious computing, you may be in for a shock. Although advertised as a full 32-bit power-house of a machine, Commodore's new home computer has a few minus points, not least that it runs at almost half its possible speed.

This is mostly due to the fact that its 2Mb basic memory is totally given over to Graphics memory, and also because adding a maths co-processor is practically impossible.

As ever, what Commodore fail to provide, the third party manufacturers are only too glad to offer. The first to make a splash was the MBX1200 from Microbotics, a combined co-processor and memory expansion.

TECH SPEC

The MBX1200 comes with a choice of memory configuration and maths co-processor. As the maths co-processor (Floating Point Unit) seems to be compulsory, unless you plan to make extensive use of image rendering, ray tracing and morphing packages you would be advised to get the simplest FPU available – a 14MHz 68881.

Faster 68881s and 68882s won't make as much difference as the addition of any FPU in the first place. If you plan to use your A1200 in a situation where processing time is a prime factor, a 68882 will run at least five per cent faster. Upgrading the FPU after purchase is possible, and a spare socket on the board is available if a faster clock crystal is required.

FITTING

SIMMs being what they are, I would go so far as trusting my mother to fit one to the MBX board. If you buy your MBX and memory together, you probably won't even need to ask her, as the dealer will have already fitted it.

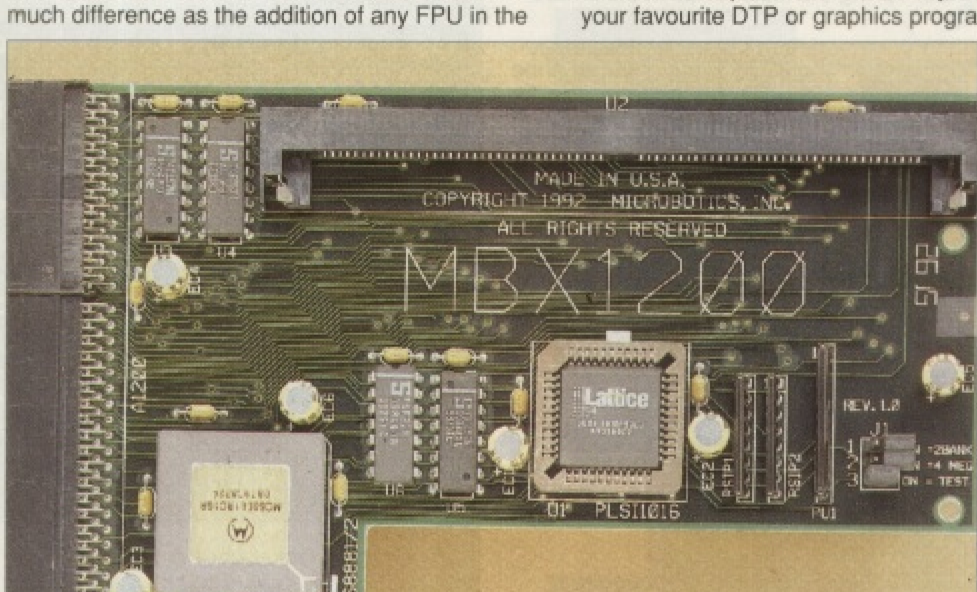
Inserting the MBX1200 is a different matter entirely, but it still only involves turning the machine upside down, opening the trapdoor with a five pence piece and spending 15 minutes edging the card into place. If you have a weak heart any dealer worth his salt will be able to fit the board while you wait.

Replacing the plastic hatch and switching on will result in nothing more exciting than a large number appearing beside 'other mem' in the Workbench title bar. Everything else will appear as normal – except, of course, when you begin to use your favourite DTP or graphics program.

MEMORY

Purely as a memory expansion, the MBX may seem a bit pricey . It's also extremely limited in that it only offers one SIMM slot. This means that you can't expand memory in increments as funds allow, rather you buy a 1Mb, 2Mb, 4Mb or 8Mb SIMM, and junk it when you want to upgrade. As the memory added to the MBX is fully auto-configuring 32 bit Fast Ram its speed is almost legendary. Any memory added here will almost double the speed of the A1200 when non-games software is used, although programs such as *Grand Prix* and some flight sims also show an immediate improvement.

If you already own an A1200, buying an MBX populated with as much memory as you can afford will certainly answer your processing needs for a considerable time to come. Add a hard drive and you have a system which offers exceptional power at very reasonable cost.



The MBX1200 comes in a variety of configurations. There are two FPUs to choose from (68881 at 14 MHz or 68882 running at 25 MHz), and it can hold 0, 1, 2, 4 or 8Mb of RAM.

DIAMOND COMPUTERS £VARIOUS

A500 ✗ A500+ ✗ A600 ✗ A1200 ✓
A1500 ✗ A2000 ✗ A3000 ✗ A4000 ✗

DIAMOND COMPUTERS, 84 LODGE ROAD, SOUTHAMPTON, SO1 2QS. TEL: 0703 232669

EASE OF USE 64%
Quite hard to fit into the trapdoor.

VALUE FOR MONEY 71%
Quite expensive. An option on the FPU would help.

EFFECTIVENESS 87%
Instant increase for all non-games software. Most 3D games speed up too.

FLEXIBILITY 52%
Although it enables RAM and co-processor expansion, no further expansion is possible.

INNOVATION 83%
The first, but probably not the last, useful expansion for the A1200.

" Doubles the speed of the A1200 – at a price. Limited in its overall expansion. "

OVERALL 78%

A1200 IDE DRIVES

Technophiles can complain all they like that the IDE hard drive interface is rubbish compared to SCSI, but they can't change the fact that for the first time entry-level Amigas are appearing with hard drive interfaces as standard.

The A600 caused a stir with its integral interface, and the A1200 carries on the tradition. To transform your machine into a workstation, you just need to buy a hard drive and cable and plug them in – no other hardware is required.

TINY

The drives themselves are minute 2.5 inch mechanisms – that measurement is the size of the internal disk platter. The height is less than an inch, and they can easily fit inside the A1200's diminutive case with room to spare.

If you opt to fit the drive yourself, you'll find that your official on-site warranty from Commodore will evaporate when you remove the Amiga's top cover. This needn't be a worry, as it's instantly replaced with a back-to-base warranty offered by the dealer you bought the drive from. The design is very tried and tested having been used in portable PCs, so it is quite unlikely that you will find the drive itself is defective.

The entire fitting operation takes less time than it does to fit an MBX1200 memory expansion. First you remove the screws around the bottom of the casing, then you lift the lid off. Attach the small cable, screw in the fixing bolts and replace the lid.

When you power up, you'll notice three things. First, your Amiga now sounds like a fridge as the drive starts to whirr. Secondly the up-to-now unused hard drive LED on the keyboard starts to flash and thirdly, you've never seen Workbench load so quickly.

IN USE

The Amiga's operating system is so powerful and geared towards hard drive use that your productivity levels will soar. Operations that would have taken a whole day can be achieved in half an hour.

Choosing the size of your drive is tricky. It's generally reckoned that 20Mb is far too small – after all, most of us have more than 20 floppy disks. 40Mb is getting there, but 60Mb or 80Mb is a good starting figure.If in doubt, get a bigger one.

Booting with both mouse buttons held down will present you with the special Kickstart menu options. From here it's possible to disable the hard drive, and although it will still do its fridge impersonation it won't be available for use. Having a hard drive may otherwise cause a problem with some games software, but then again, so does having an A1200…

SPEED

Unlike SCSI, the IDE standard is geared towards PC compatibles and is therefore only 16 bits wide.

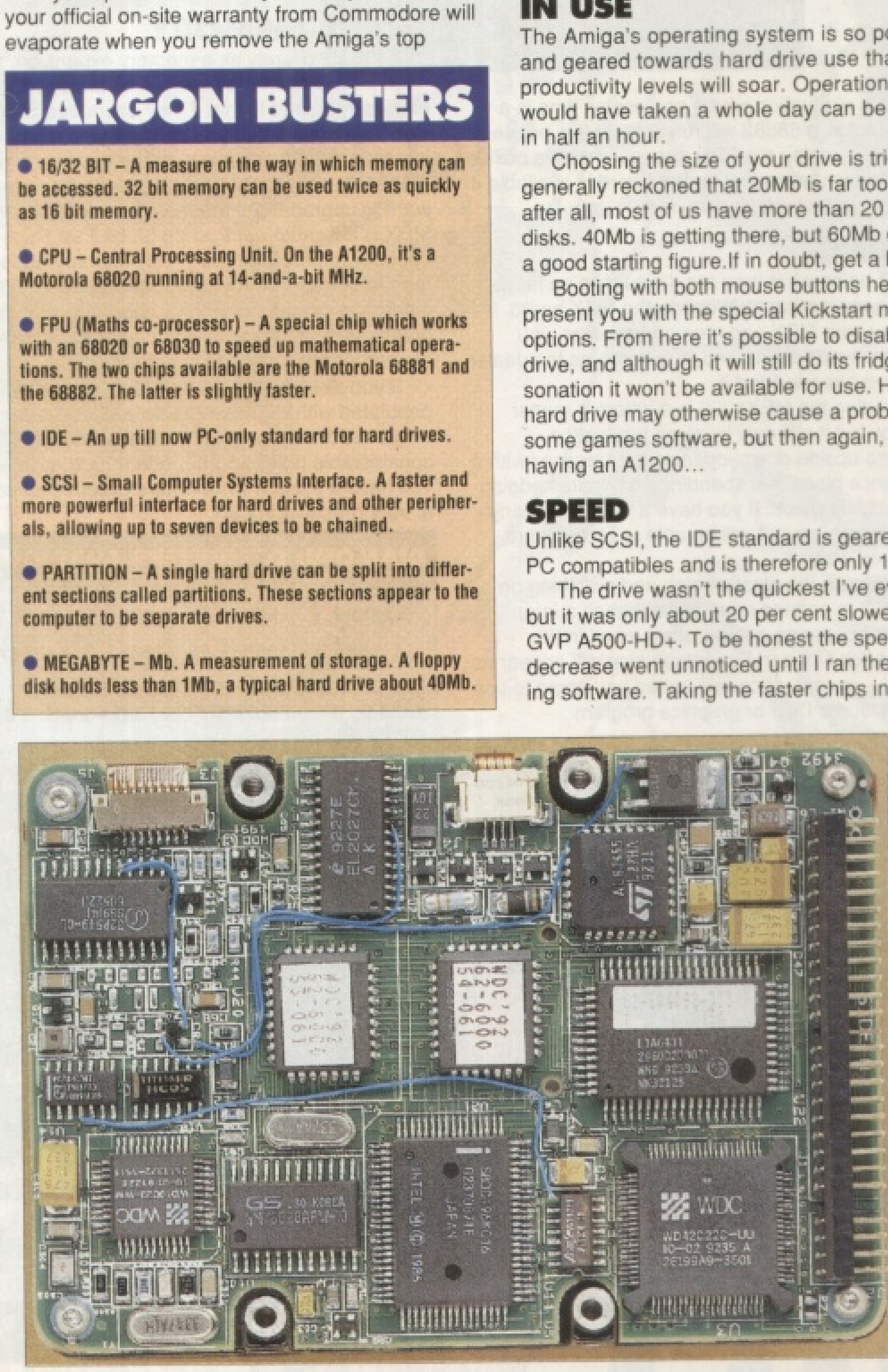
The drive wasn't the quickest I've ever seen, but it was only about 20 per cent slower than my GVP A500-HD+. To be honest the speed decrease went unnoticed until I ran the speed testing software. Taking the faster chips in the A1200 into account, most operations seemed a lot quicker, even if they actually weren't.

The special hard drive installation software is still a grey area, and probably will be until Commodore start selling A1200HD units. Luckily, the A4000 software seems to do the trick – in fact it was a tweaked A4000 disk that Commodore sent to us.

The disk contained the installation software and a hard drive tool kit and backup program. Most dealers will already have performed the installation process, but the extra software is useful if you need to alter the number of partitions on your drive. Usually the drive is formated with a small partition containing the actual system software (Workbench) and a much larger one for all of your applications.

JARGON BUSTERS

- 16/32 BIT – A measure of the way in which memory can be accessed. 32 bit memory can be used twice as quickly as 16 bit memory.
- CPU – Central Processing Unit. On the A1200, it's a Motorola 68020 running at 14-and-a-bit MHz.
- FPU (Maths co-processor) – A special chip which works with an 68020 or 68030 to speed up mathematical operations. The two chips available are the Motorola 68881 and the 68882. The latter is slightly faster.
- IDE – An up till now PC-only standard for hard drives.
- SCSI – Small Computer Systems Interface. A faster and more powerful interface for hard drives and other peripherals, allowing up to seven devices to be chained.
- PARTITION – A single hard drive can be split into different sections called partitions. These sections appear to the computer to be separate drives.
- MEGABYTE – Mb. A measurement of storage. A floppy disk holds less than 1Mb, a typical hard drive about 40Mb.



Surprisingly fast for an IDE hard drive, the 60Mb Tidbit is less than one inch high and easily fits inside the 1200's case.

THE PROS AND CONS OF GRAPHICS MEMORY

Amiga memory is split into two types: Chip Ram and Fast Ram. These are given the names of 'Graphics' and 'Other' mem at the top of a Workbench 2 or 3 screen.

What makes the Amiga technically more advanced than other computers are the custom chips which handle graphics and sound. These chips work together with the CPU, but both need to be able to access the memory in which the sound, graphics and general program data are stored.

Memory which is shared between the two systems is called Chip Ram. The custom chips always get priority to Chip Ram, as their operations are usually time-critical. Therefore the CPU can expect to be occasionally locked out from Chip Ram, which will obviously slow it down slightly.

Fast Ram can only be accessed by the CPU – the custom chips can never touch it. Thus programs stored here will run as fast as the CPU can manage, or at least until some sound and/or graphic operations are needed.

Most action games are tied completely to the speed of the screen update, and so the addition of Fast Ram will be completely inconsequential to them. However, a program such as a ray tracer or a game with lots of 3D calculations, will benefit from Fast Ram – in some cases running at least twice as fast.

DIAMOND £179/299

A500 ✗	A500+ ✗	A600 ✗	A1200 ✓
A1500 ✗	A2000 ✗	A3000 ✗	A4000 ✗

DIAMOND COMPUTERS, 84 LODGE ROAD, SOUTHAMPTON, SO1 2QS. TEL: 0703 232669

EASE OF USE ♦♦♦♦♦♦♦♦♦♦ 90%
Fitting isn't difficult, using it is a dream.

VALUE FOR MONEY ♦♦♦♦♦♦♦♦♦♦ 81%
As they come from the PC world, the drives tend to be competitively priced. Pity about the Amiga cable.

EFFECTIVENESS ♦♦♦♦♦♦♦♦♦♦ 89%
Not the fastest hard drive, but still 30 times faster than floppies.

FLEXIBILITY ♦♦♦♦♦♦♦♦♦♦ 83%
Makes using Workbench on the Amiga a positive pleasure. Instead of a floppy chore.

INNOVATION ♦♦♦♦♦♦♦♦♦♦ 92%
Begins to make Commodore's decision to chose IDe look eminently sensible.

> *Once you use a hard disk you'll never go back to floppies again.*

OVERALL 80%

DIAMOND

Buy With Confidence

Reasons To Be Cheerful, Part 10

1. **Diamond** shops are strategically based within major cities and not on expensive industrial parks. The majority of our shops are owned by Diamond so overheads can be kept to a minimum, hence guaranteeing you the best prices.
2. **Diamond** have over 100 staff, with over 50 trained sales people and dedicated engineers in every shop.
3. **Diamond** having retail shops allows you to see and evaluate any merchandise before you make your purchase.
4. **Diamond** are always easy to contact, we have 50 telephone sales lines, 16 fax machines & a separate Direct Mail Order Service number.
5. **Diamond** have a full Customer Service Dept. at head office in Southampton which has been quoted in the press as "the envy of the computer retail market."
6. **Diamond** are Northern Europes leading Amiga dealer.
7. **Diamond** have in excess of 3000 product lines in every store at any one time.
8. **Diamond** offer technical support six days a week & are regarded as Amiga experts.
9. **Diamond** Prices are unbeatable and that is guaranteed with our Price Pledge which promises to match any other dealers price.
10. **Diamond** philosophy works, in a recent independent survey it was shown that 9 out of 10 customers preferred to buy from a local source. Diamond promise that during 1993 we will continue to expand to bring us even closer to you.

NEW SHOP OPEN IN PORTSMOUTH
Tel. 0705 811136
FAX 0705 822297
MAMMOTH OPENING SALE DAY ON 20TH MARCH
This branch only

Listed below are just some of the people who trust Diamond's Philosophy

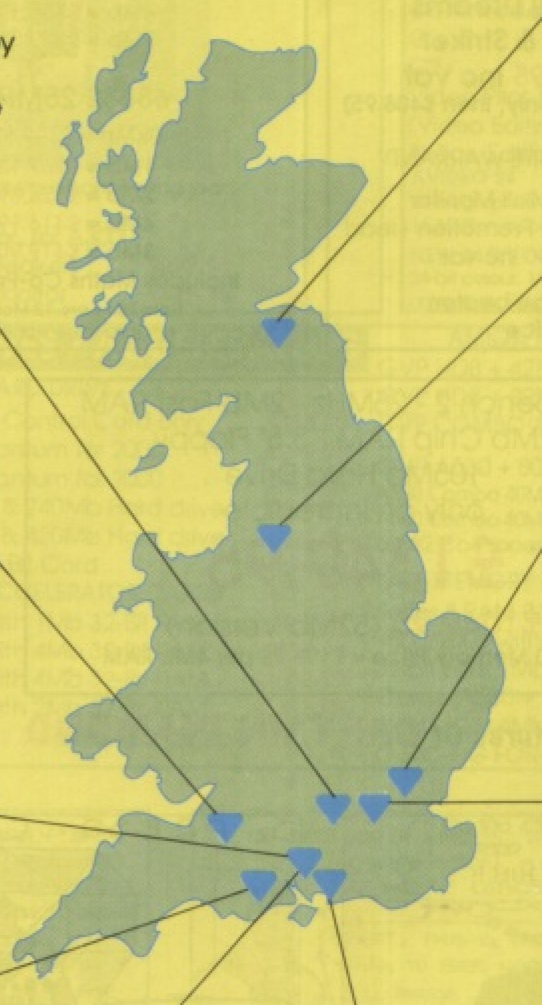
BBC TV, MOD, British Telecom, GEC, British Aerospace, Rolls Royce, Shell (UK), HM Prisons, National Health Service RACAL, Granada TV, The Open University, Philips, Plessy, British Steel, Barclays Bank, The Royal Air Force & Royal Navy, Vosper Thornycroft UK, Mobil North Sea Oil, The Scottish Office, Scottish Nuclear Fuel, Britsh Coal, British Rail, Thorn EMI, HM Customs & Excise, News International (The Sun, The Times etc.) and not to mention 27 local county councils & many many many more.



SLOUGH


BRISTOL


CORPORATE SALES



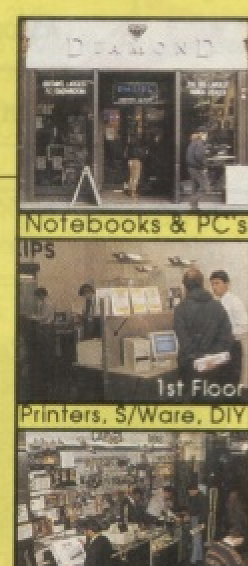


EDINBURGH


MANCHESTER



ROMFORD

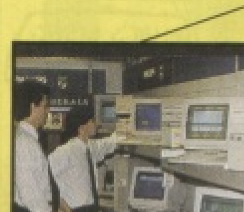


TCR LONDON W1

THE DIAMOND PRICE - PLEDGE

If, whilst buying goods from us, you can show us a better price for the same goods in stock with one of our UK competitors then we will match it.

This pledge applies only to customers relying on this advertisement before the 10th day of the month of publication. It does not apply to competitors prices offered in closing down or stock clearance sales. Please bring the competitors details with you so we can verify any claim.


POOLE, DORSET



SOUTHAMPTON


PORTSMOUTH

For Branch Details see Last Page Of This Advert

NEW VIDEO EDITING SYSTEM FROM V3I
V330+ only £1291.33
OR COMPLETE VIDEO EDITING SYSTEM
V330, Amiga 1200 with 60Mb HDD
Scala, D-Paint IV AGA Version
£1995

FREE
Cpt.DIAMOND
SOFTWARE CLUB
MEMBERSHIP WITH
EVERY PURCHASE OVER £100
Limited offer until March 10th

Amiga 600

1Mb RAM **PACK** 1Mb RAM

Basic A600 only
£239.95

Captain Diamond's upgraded A600 packs using the superb 2.5" Quantum Drives as used in most notebooks

A600 with 40Mb Quantum only £349.95 inc vat

Or with 8833 Mk II Monitor
+Turbo Challenge II Promotion + lead
ADD £209 inc vat
12 month on site warranty

Add £44.95 for 1Mb extra RAM

A 600 a Hard Disk see opposite
Hard Disk repairs: 12 months return to base

LIMITED STOCK

CAPTAIN DIAMOND'S AMAZING HARD DISKS

40Mb HARD DISK FOR THE A600 & A1200
ONLY £149.95

ADD £4.95 FOR AMIGA 1200 CABLE
ADD £9.95 FOR AMIGA 600 CABLE

60Mb only £174.95 inc vat
80Mb only £229.95 inc vat
130Mb only £349.95 inc vat
170Mb only £459.95 inc vat
200Mb only £549.95 inc vat

For fitting by a Diamond engineer please add a further £49.95 to the purchase price. If you wish to fit your own Hard Disk please be warned, opening up your own Amiga may invalidate your guarantee.

All Hard Disks are 12 Months return to base warranty

LIMITED STOCK

Lotus 2 is not compatible with the Amiga 1200

Amiga 1200

2Mb RAM **PACK** 2Mb RAM

AMIGA 1200 only £358.95
(Limited Stock 200 only ,then £389.95)

AMIGA 1200 ZOOL PACK
featuring
Zool,Pinball Dreams Transwrite & Striker
only £378.95 inc vat
(Limited Stock 200 only, then £408.95)

12 MONTHS ON SITE WARRANTY

Or with 8833 Mk II Monitor
+Turbo Challenge II Promotion +lead
Add £209.00 inc vat

We cannot be beaten on price

LIMITED STOCK

A1200 Memory Upgrade & Accelerator MBX Board
(0k Ram Expandable to 8Mb)

68881 14MHz
0kMb = £139.95
1Mb = £207.13
2Mb = £266.89
4Mb = £356.19
8Mb = £559.90

68882 25MHz
0kMb = £199.95
1Mb = £267.13
2Mb = £326.89
4Mb = £416.19
8Mb = £619.90

Includes Maths Co-Processor
Hard Disks are 12 Months return to base warranty

LIMITED STOCK

2Mb RAM **PACK** 2Mb RAM

NEW AMIGA 1200
Ultimate Hard Disk pack
with 40Mb HARD DISK = £529.95
with 60Mb HARD DISK = £574.95
With 80Mb HARD DISK = £614.95
With 130Mb HARD DISK = £739.95
With 170Mb HARD DISK = £849.95
With 200Mb HARD DISK = £939.95
(These prices are for the 1st 200 customers only, then add £30 to price)
12 Months return to base warranty

With 8833 Mk II Monitor add £209

We recommend you invest in a 80Mb Hard Disk instead of a 20Mb. Many games are growing in memory size, Workbench = 2Mb Monkey Island II Game = 8Mb That equals 1/2 your hard disk gone Who says size doesn't matter?

A3000

Workbench 2 - 25MHz - 2Mb Fast RAM
2Mb Chip RAM - 3.5" Floppy
105Mb Hard Drive
only an incredible
£1349.95
£1049.95 (52Mb Version)
A3000 Memory Price = £129.95 per 4Mb RAM

LIMITED STOCK

A4000

Latest 25MHz 68040 CPU - 32Bit Architecture
Built in Maths Co-Processor - 2Mb Chip RAM
4Mb Fast RAM (Expandable to 14Mb)- Amiga DOS Version 3
New AGA Graphics Chip Set.120Mb H/Disk
£1999.95
A4000 32bit Memory = £159.95
120Mb HD 2 + 10Mb = £2149.95
240Mb HD 2 + 10Mb = £2249.95

LIMITED STOCK

The NEW Adventures Of CAPTAIN DIAMOND



For your local Diamond branch details please see last page of this advert

...board 50M...
...for Amiga 5...
...able to 8Mb RA...
...only an incredible
£299 inc VAT

BARGAINS OF THE MONTH!
Philips 8833 MkII Monitor with Turbo Challenge II, £199.95
+ Free F19 Stealth Fighter for the first 500 customers
Add £9.95 for connecting lead.

Roclite Drive with Anti click/Virus £59.95

CAPTAIN'S CHIP SHOP

4X256KDRAMS	
For A590'S etc	£3.50
1X1MB DRAMS For 8up/Supra	£3.50
1x9MbSIMMS(NEXUS/GVP/Rochard)	£34.99
4x9Mb SIMMS For GVP etc	£159.95
DISK DRIVES	
AMIGA Internal	£59.95
CDTV drive	£74.95
Roclite Slimline	
no click & Virus protection	£59.95
Diamond Amiga Drive	£49.95
New floptical Drive	£549.90
21Mb disk	£57.80

COMPONENT SHOP

SYQUEST DRIVE	
Removeable cart. 44Mb 28ms	£299.00
CONTROLLER for above add	£69.95
ROM SWITCHER	
Now Available	
1.3 - 2.04 ROM Switcher	£9.95
1.3 ROM available @	£29.95
2.04 ROM available @	£39.95

GENERAL ACCESSORIES

INTERNAL DRIVE KIT	
Replacement A500 Internal 3.5" drive kit, fully compatable with 1Mb unformatted capacity. Comes with easy to follow guide	£59.95
MICE	
New Roboshift, Auto sensing Joystick/Mouse switch box	£13.95
Primax Mouse	£16.95
Techno Mouse (With free Thunderhawk or Mystery Game)	£19.99
Naksha Upgrade Mouse	£22.95
TRACKBALL	
One hand control unit, after using this you will never want a mouse again	£29.95
LEADS & ADAPTORS	
Null Modem Cable	
Amiga to Amiga Lead	£16.99
Four Player Adaptor	£6.95
Amiga to Sony TV Lead	£14.95
CONTROL CENTRE	
Turn your Amiga into the ultimate hi-tech intergrated workstation environment. 600 = £24.99 1200 = £39.99	
POWER SUPPLY	
Commodore A500 A600 PSU with the switch mode (£10 OFF with P/X)	£49.95
SOUND EXTRAS	
Amiga Sound Enhancer	£35.99
Stereo Speakers	£39.95
EMULATORS	
Golden Gate 386-20 for 1500/2000	£349.00
Golden Gate 486SX25.1500 /2/3/4000	£749.00
GVP 16MHz PC-286 1500/2000	£137.99
DUST COVERS A600/500/1200	£2.95 each

MEMORY UPGRADES

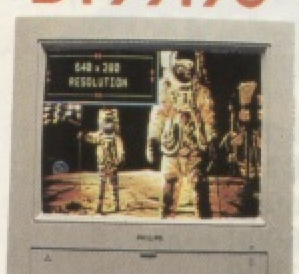
New Smart Card memory upgrade (A600)
2Mb only £129 — 4Mb only £169

DIAMOND'S A600/A1200 MEMORY CARDS
Small Compact Credit Card Size.
P-SEUDO SRAM Card 0.1. Power Consumption
2Mb Memory Upgrade £99.95
4Mb Memory Upgrade £169.95

New 2.04 Official Upgrade with manuals & ROM only	£79.95
A500 Plus 1Mb Expansion	£39.95
New A600 1Mb Expansion	£54.95
Supra 500RX 2Mb Expan.(500/500+)	£139.95
512K RAM Expansion + Clock (500)	£34.95
Above without clock	£29.95
1.5Mb Mb Expansion (Not Plus)	£79.95
1Mb Expansion with Thru-Port (500)	£49.95
8Mb RAM Board for A1500 or 2000	
Aries Board 0Mb	£79.95
For each 2Mb RAM add	£56.00

MONITORS

Philips 8833MkII +Turbo Challenge II
SALE PRICE ONLY
£199.95



Add £9.95 for your connecting lead.

Philips 14"SVGA monitor, for A3000 or A4000 with stereo speakers	£292.58
CBM 1960 Multisync Monitor	£429.95

DIAMOND MODEMS

Now with a Fax-modem you can link straight into bulletin boards for the latest info. or use your Amiga as a fax to send/receive hard copy.

Diamond Dynalink Pocket Modem
This Amiga Modem has a 9600 baud in send receive mode (Can be a fax using GP S/W) £149.95

External (Via serial port) 9600Bps send/receive Fax + 14400Bps data modem; CCITT V .21, V.22 V 22Bis, V 32 with V.42,V.42Bis MNP 2-5 £249.95

SUPRA MODEMS

Supra-Fax modem V.32 (14400 baud)	£258
Heavy Duty Prima Power Supply for above £10 when ordering the above Fax-Modem.	
Supra-Fax Plus (9600 baud)	£128
Supra 2400 (external)	£74
Supra Modem (Internal)	£133

Turn your Amiga into a Fax Machine with GP Fax Software only £49.95 when buying any of the above Modems. £69.95 seperately.

GRAPHICS & VIDEO

New ICD Flicker fixer	£209
GVP Impact Vision 24 Bit Card (!500/2000/3000) from	£1550
DCTV (Pal Version)	£440.00
Rocgen	£89.95
Rocgen +	£124.95
Rendale 8802	£119.95
Rendale 8806 RGB	£499.00
Commodore 2300 Int	£99.00
G2	£575.00
G2+	£999.00
Video Pilot V330 (Video Editing)	£1291.33
Philips Editing System	£399.00
AVIDEO 24 24-bit graphics for the A500- 16.8million colour frame buffer.	£589.00
NEW 24 BIT OPAL CARD 24-bit colour. 16.8 million colours.Full animation. Fits all Amigas	£634.99

GVP HARD DRIVES / ACCELERATORS

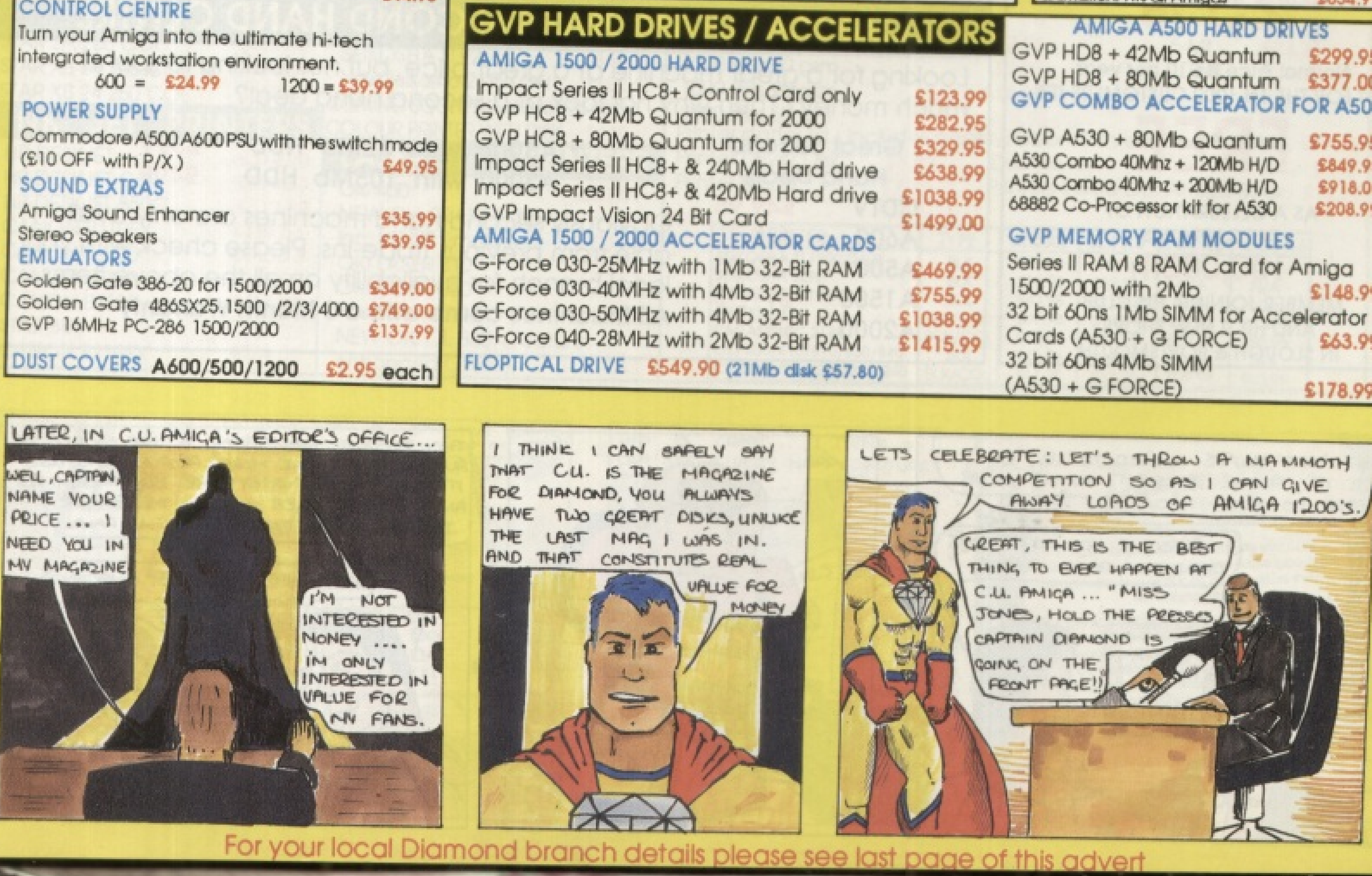
AMIGA 1500 / 2000 HARD DRIVE	
Impact Series II HC8+ Control Card only	£123.99
GVP HC8 + 42Mb Quantum for 2000	£282.95
GVP HC8 + 80Mb Quantum for 2000	£329.95
Impact Series II HC8+ & 240Mb Hard drive	£638.99
Impact Series II HC8+ & 420Mb Hard drive	£1038.99
GVP Impact Vision 24 Bit Card	£1499.00
AMIGA 1500 / 2000 ACCELERATOR CARDS	
G-Force 030-25MHz with 1Mb 32-Bit RAM	£469.99
G-Force 030-40MHz with 4Mb 32-Bit RAM	£755.99
G-Force 030-50MHz with 4Mb 32-Bit RAM	£1038.99
G-Force 040-28MHz with 2Mb 32-Bit RAM	£1415.99

FLOPTICAL DRIVE £549.90 (21Mb disk £57.80)

AMIGA A500 HARD DRIVES	
GVP HD8 + 42Mb Quantum	£299.95
GVP HD8 + 80Mb Quantum	£377.00
GVP COMBO ACCELERATOR FOR A500	
GVP A530 + 80Mb Quantum	£755.95
A530 Combo 40Mhz + 120Mb H/D	£849.95
A530 Combo 40Mhz + 200Mb H/D	£918.00
68882 Co-Processor kit for A530	£208.99
GVP MEMORY RAM MODULES	
Series II RAM 8 RAM Card for Amiga 1500/2000 with 2Mb	£148.99
32 bit 60ns 1Mb SIMM for Accelerator Cards (A530 + G FORCE)	£63.99
32 bit 60ns 4Mb SIMM (A530 + G FORCE)	£178.99

MAIL ORDER HOTLINE: PHONE 071 580 4259

MAIL ORDER HOTLINE: PHONE 071 580 4259



For your local Diamond branch details please see last page of this advert

DIAMOND ARE THE No 1 FOR ALL THE TOP GAMES

DEDICATED GAMES CENTRE IN BASEMENT AT OUR TOTTENHAM COURT ROAD BRANCH

Wolf Child £5	Thunder Hawk £5	Live & Let Die £5	Rick Dangerous £5	Trivial Pursuit £5	Shufflepuck Cafe £5	Data Storm £5	Kid Gloves £5	Corporation £5	Teenage Turtles £5	Gunship £5
Asterix £5	Drivin' Force £5	On Slaught £5	Rock 'N' Roll £5	E-Motion £5	Predator £5	Monty Pythons £5	Predator 2 £5	Cadaver £5	Back to the Future III £5	M.Reids Pop Quiz £5
Chess Player 2150 £5	Torvak The Warrior £5	Pipe Mania £5	F-19 £5	Dungeon Quest £5	Tower of Babel £5	Power Play £5	Carv-Up £5	Line of Fire £5	Gazza II £5	Grand Monster Slam £5

ANY FIVE BUDGET TITLES FOR ONLY £20 OR £5 EACH

CAPTAIN DIAMOND'S CELEBRATION PARTY PRICES

PREMIER MANAGER	ONLY £15.59
NICK FALDO GOLF	ONLY £20.99
ZOOL	ONLY £15.59
SENSIBLE SOCCER 92/93	ONLY £15.59
ROME AD92	ONLY £17.99
INDIANA JONES / FATE	ONLY £22.79
WING COMMANDER	ONLY £20.99
CAMPAIGN	ONLY £20.99
JOHN MADDENS FOOTY	ONLY £15.99
LOTUS 3 ULTIMATE	ONLY £15.99

ZOOL, PINBALL, STRIKER, TRANSWRITE, WORDPRO
£29.95 COMPLETE OR £15.00 EACH

CLUB MEMBERS PRICE ONLY
(Prices are already discounted)

CLUB MEMBER SPECIAL

Why not join Captain Diamond's Discount Club and save a fortune on all your games
Personal callers only
Normal saving off RRP

25%

Normal Price is £10 per year
BUT FOR THE 1st 1000 CUSTOMERS IT'S

FREE

AS A CELEBRATION OF THE CAPTAIN'S
100,000th
MEMBER JOINING HIS CLUB, AND HIS 2 NEW SHOPS IN SLOUGH & PORTSMOUTH

CAPTAIN DIAMOND'S PART EXCHANGE CENTRE

Why bother with an expensive Hard disk for your A500, when you can get an incredible part exchange deal.
For example, if you were considering buying a 42Mb GVP Hard Disk for your A500 it would cost you £299.95, why not think about a part exchange deal instead. You could P/X your A500 for £75 against the amazing A1200 with a 40Mb Hard Disk already built in and then you would only effectively have to pay another £155 on top of the £299.95 you were already going to pay, giving you a total of only £454.95 for the very latest in technology from Amiga.

YOU KNOW A PART EXCHANGE MAKES SENSE

Allowance against A1200	
CDTV	£25
A600	£50
A500	£75
A1500	£75
A2000	£75

Allowance on A3000 against A4000	
A3000 with 52Mb HDD	£250
A3000 with 105Mb HDD	£350

To guarantee these prices, systems must be in good working order and boxed with original manuals, if not subject to managers discretion a lower price may be offered

CAPTAIN DIAMOND'S SECOND HAND CENTRE

Looking for a great machine at a great price, but not looking to spend much money? Then why not look at a second hand deal?

Great Second Hand Deals	
CDTV	£49.95
A600	£79.95
A500	£99.95
A1500	£99.95
A2000	£99.95

A3000 with 52Mb HDD	£399
A3000 with 105Mb HDD	£499

Obviously second hand machines are only available from previous trade-ins. Please check with your local branch for availability on all the above items.
All Machines come with a 3 Month Warranty



Disk
Amiga,
£5.00
specify model)

You Can't Buy Printers Cheaper Than Diamond



BJ10EX £191.53



OKI 410 £703.83

Oki 400 0.5Mb only £527.57





H.P. DESK JETS

500	Mono	£314.90
500	Colour	£398.33
550	Colour	£512.30

SP 1900+ £108.10

H.P. Laserjet IV 2Mb RAM £1227.88

H.P. Best UK Prices

OTHER BARGAINS OF THE MONTH

HP Laserjet IIIP	only £734.38
Citizen Swift 240 Colour	only £233.83
Panasonic KXP 2123 Col.	only £193.88
Epson LX 400	only £108.10
NEC P22	only £215.03
Star LC 100 Colour	only £143.35

with 4Mb RAM = £1345.38
with 6Mb RAM = £1462.88
2Mb Upgrade = £116.33
4Mb Upgrade = £233.83

DOT MATRIX PRINTERS

STAR LC20	£121.03
STAR LC100 Colour	£143.35
STAR LC 200 Colour	£176.25
STAR LC 24/200 MONO	£197.40
STAR LC 24/200 COL	£244.40
STAR ZA 200 COL	£309.03
STAR XB 24 200 COL	£394.80
STAR XB 24 250 COL	£459.43
CITIZEN SWIFT 9 COL	£146.87
NEW CITIZEN SWIFT 200	P.O.A.
CITIZEN SWIFT 240 COL	£233.83
CITIZEN SWIFT 24X	£284.35
CITIZEN SWIFT 24X COL	£311.38
SEIKOSHA SP 1900+	£108.10
SEIKOSHA 2400	£133.95
SEIKOSHA SL92	£166.85
New Seikosha 24 Pin Col	£182.13
COMING SOON, DIAMOND 24 PIN COLOUR PRINTER WITH DISK	£199.95

INK JET PRINTERS

HP DESKJET	£314.90
HP DESKJET COL	£398.33
HP DESKJET 550C	£512.30
CANON BJ10EX	£191.53
CANON BJ200	£313.73
CANON BJ300	£363.08
CANON BJ330	£415.95
STAR BUY CANON BJ10SX	£269.08

LASER PRINTERS

Oki 400	£527.57
NEW Oki OL410 1Mb inc. HP IIIP Emulation	£703.83
OKI LASER 810	£938.83
OKI LASER 830 Postscript 2Mb	£938.83
NEW OKI OL 850. (Feature enhanced OL840)	£1408.83

PRINTER PERIPHERALS

2 way Switch Box	£19.95
4 way Switch Box	£29.95
Centronics / Centronics Cable	£14.95

PAPER

500 shts100 gsm	£7.95
1000 shts 60 gsm	£9.95
1000 shts 90 gsm	£14.95
2000 shts 60gsm	£14.95

PARALLEL LEADS

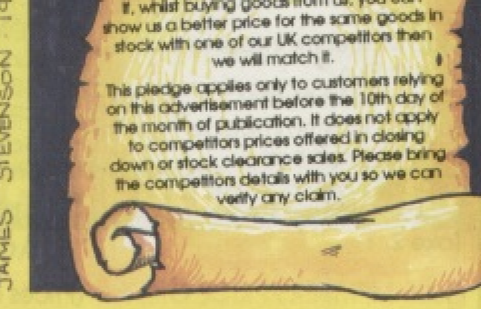
1 Mt	£9.95
1.8 Mt	£14.95
2 Mt	£16.95
3 Mt	£19.95
5 Mt	£24.95
10 Mt	£29.95

Printer starter kit : Includes paper, ribbon, Printer stand & cable £29.95
Printer Driver Disk £5.00
Printer Stand £7.95
Dust cover £4.95
Printers Inside Out Amiga Book £19.77

PRINTER	TYPE	BLK X2	BLK X6	COL X2	COL X6
SEIKOSHA SL1900/2400	BLK	£15.98	£43.15	N/A	N/A
SEIKOSHA SL90	BLK	£11.98	£32.35	N/A	N/A
CANNON BJ10EX	BLK	£43.98	£118.75	N/A	N/A
HP DESKJET	BLK/COL	£49.98	£134.95	£49.98	£134.95
PANASONIC 2180	BCK/COL	£15.98	£43.15	£29.98	£80.95
OKI 400/410/810/830/840	BLK	£49.98	£134.95	N/A	N/A
CITIZEN9/24e/200/224/240	BLK/COL	£11.98	£32.35	£29.98	£80.95



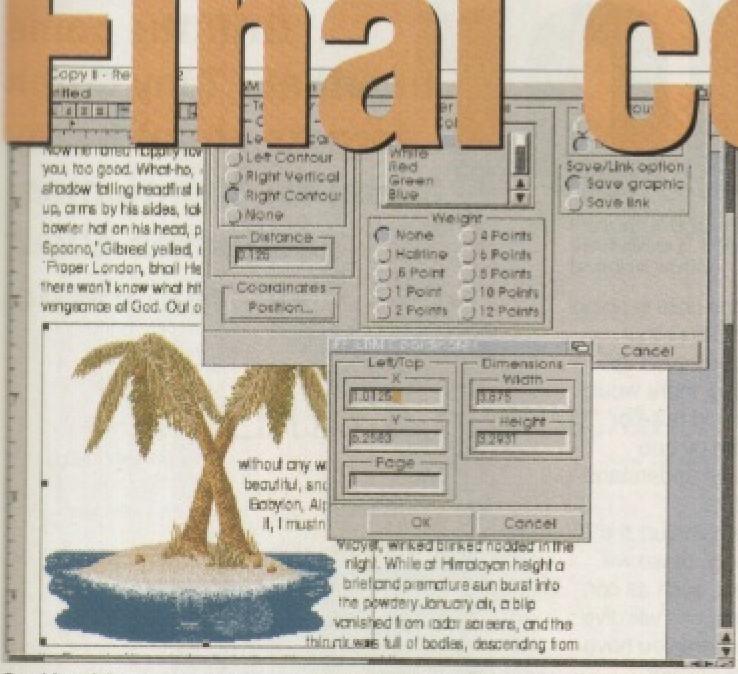




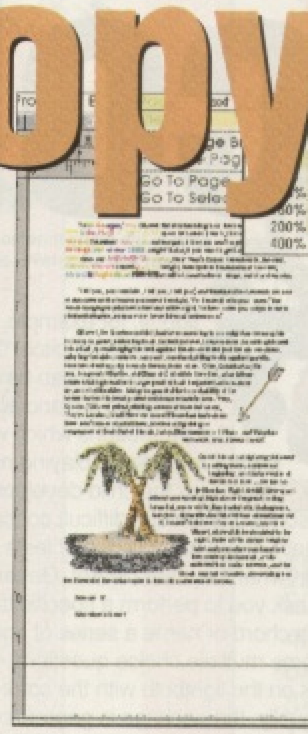
For your local Diamond branch details please see last page of this advert

Final copy II Update

Jeff Walker discovers the latest version of Softwood's wordprocessor supports so much more.



Graphics sizing and positioning can be done by hand or via the IFF ILBM coordinates requester. It could do with scaling gadgets to complete the feature.



Eight levels of magnification are plenty to see the smallest point sizes and a general overview of your layout. The blank area to the right in this screenshot can be used as an 'art board' on which graphics can be stored temporarily.

Final Copy II, as its name suggests, is a word processor dedicated to producing high quality printouts. It contains all the basic text editing features expected of a word processor – cut, copy and paste; find and replace; rulers for formatting individual paragraphs, blocks of text or the whole document; and, of course, a spelling checker and thesaurus. It is another in the recent spate of what like to be called 'Page Publishers', a half-way house between a standard text processor and a DTP package.

NEWSLETTER COLUMNS

Up to six columns are supported should you want to produce a newsletter type document, and graphics can be imported – anything from simple black-and-white IFFs up to 24-bit, including 256-colour and HAM8 pictures. Graphics can either be saved as part of the document, which is a better way to work with floppies as it keeps all elements of the document together in one file, or just the 'link' to the graphic can be saved (the path and filename), which makes for smaller document sizes and is a handy way to work if you have a library of often-used graphics on your hard disk.

Rudimentary art tools are provided for drawing lines, boxes and ellipses, filled or unfilled. Text can be made to automatically flow around the contours of these graphics, or indeed imported IFFs. Graphics can be sized and positioned by mouse or by entering measurements and coordinates into a requester. There's even an 'art board' – an area outside the actual page size on which graphics can be temporarily stored.

This graphics support is 75 per cent of the way towards what you would expect from a full-blooded desktop publishing program.

TYPE AND STYLE

Typeface support, likewise, is closer to DTP than word processing. As well as SoftWood's home-baked outline typeface support, PostScript Type 1 support has now been added. As there are thousands of inexpensive PD and shareware Type 1 typefaces available, *Final Copy II (Release 2)* now has the most comprehensive typeface support of any Amiga word processor. The program even sports a 'style tagging' system that is more powerful than that of the Professional Page DTP package, and there is macro support via ARexx should you want to write scripts that perform laborious or repetitive tasks.

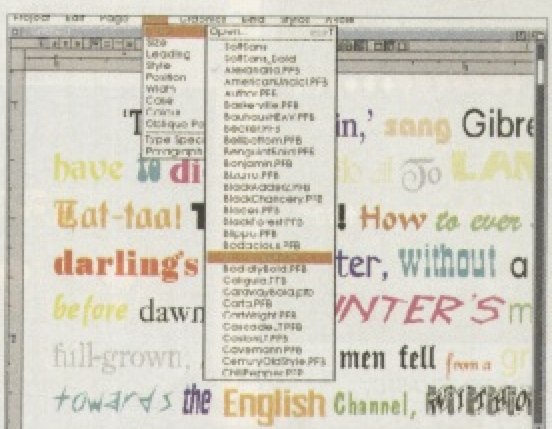
Five families of typeface (plain, italic, bold and bold italic) are provided in the SoftWood outline format, plus a Symbol typeface, making 21 typefaces in all.

Printing is via preferences in the normal Amiga way. As *Final Copy II* uses nothing but outline typefaces, everything is output as graphics, which takes longer than normal text printing, especially at the highest resolutions, but the results are always worth the wait. Mono and colour PostScript printing is catered for, and if a Type 1 typeface is used in a document it is automatically downloaded as part of the PostScript file.

CONCLUSION

Final Copy II is as close to being a desktop publisher as a 'word processor' can dare to go. In fact, in many areas it has replaced the normal word processing way of doing things with the DTP way – witness the style tags, the drawing tools, and the optional coordinate system for graphics sizing and positioning.

The program has been criticised for being short on professional features like footnotes and index creation, but looking at the ARexx support I see no reason why these features, and many others, can't be implemented as ARexx macros. Perhaps SoftWood's next move should be to include a library of such macros with the package, if only to compete in the 'features provided' department with its biggest rival, Wordworth.



The new PostScript Type 1 support enables you to use the thousands of inexpensive PD and shareware typefaces that are available in this format.

JARGON BUSTERS

- *ARexx* - a macro language, derived from Rexx, which is used primarily on the Amiga to interface between different applications or automate various processes.
- *Style tagging* - a system for automatically applying a common set of text attributes (size, font, etc.) to multiple text items, such as headers, subheads, etc.

SOFTWOOD £99.95

A500 ✓	A500+ ✓	A600 ✓	A1200 ✓
A1500 ✓	A2000 ✓	A3000 ✓	A4000 ✓

GORDON HARWOOD COMPUTERS, NEW STREET, ALFRETON, DERBYS DE55 7BP. TEL: 0773 836781

EASE OF USE 91%
Setting up the correct page size for you printer will be the most difficult job.

VALUE FOR MONEY 84%
So close to being a DTP package that it can only really be compared with PageSetter³, which costs half as much and is far more powerful, though more difficult to master.

EFFECTIVENESS 84%
Lacks some of the more powerful word processing features, but less is more when it comes to learning the ropes.

FLEXIBILITY 82%
Can do anything from simple text-only letters to many-paged multi-columned documents incorporating 24-bit graphics.

INNOVATION 92%
The first Amiga word processor to support PostScript Type 1 typefaces.

"A word processor that makes you want to use it."

OVERALL 81%

Musicolor

The CDTV and Derek Griffiths come together? Tony Dillon forgets about heavy metal for the moment and learns about real music.

For most school children, music lessons are a bit of a nightmare. Generally, a fair bit of time and a lot of effort has to be put in if you want to develop an understanding of music theory and, for most children, this part of music just isn't stimulating enough. Virgin's *Musicolor* (sic) looks set to change all that.

Packed into two compact discs, the program aims to teach children sight reading and singing, the basic theory behind the construction and relationships between chords and composition using music shorthand. Phew!

WHO'S INTERESTED?

What you might be wondering at this point is how, exactly, are you going to get the target audience (seven years and older) interested in this side of music? After all, it's all very well smashing away on a xylophone or whacking a drum, but music theory? Too much like homework, isn't it? Not quite. *Musicolor* is based on a revolutionary teaching system developed by Candida Tobin, designed to stimulate young minds using suitable mnemonics and simple rules. By tackling the subject in a straightforward and entertaining way, the learning rate is greatly accelerated.

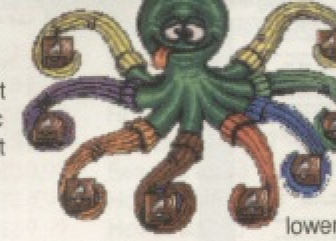
A lot of time was spent selecting the right voice for the package, too. Virgin didn't want someone who was too patronising, but then again they didn't want someone who didn't appeal to kids. In the end who should they pick but one of my personal heroes – Derek Griffiths! Derek is well known for his work with children, through Play School and any number of Sunday morning children's programs.

The program is presented as a series of 15 lessons, written to be played in sequence starting with basic terms and an introduction to the Tobin System, and then gently introducing chords, sheet music and note recognition. The proper terms are used right from the start, so the child has plenty of time to get used to them, rather than use dressed-down versions initially and thus confuse the child later.

Each lesson is made up of a combination of demonstrations, interactive examples and tests. In the demonstrations, particular topics are explained in detail, but all the child can do is watch. An example of a demonstration is the first time the Composition screen is displayed. The narration describes what each button does, and an arrow on screen highlights the button. No buttons at this point are operative.

GETTING INVOLVED

Interactive examples are the true teaching part of the program. Like the demonstrations, the narrative will explain how certain functions work, but this time the child can experiment with the topic under examination. If, for example, the child is doing a lesson on pitch, and how the same note can be duplicated up and down a piano scale, there would be two buttons which would raise or lower the currently playing note by one octave. This is how the child develops an understanding of some of the more difficult concepts.



One of the many mnemonics. There are eight notes to an octave, so this is represented with an Octopus!

Finally, there are a series of tests which quiz the child on what they have learnt. Generally, these will either ask you to perform a specific task, such as construct a chord or name a series of notes, or it will give you some multiple choice questions, where you have to click on the lightbulb with the correct answer.

Visually, the package is geared to be simple. The screens contain only what is completely necessary. If a button isn't going to be used on a particular screen, then it isn't included, leaving less chance of confusing the user. There are no blocked options, no irreversible moves and no hidden functions. Everything is instant. With icons that look like the functions they perform and the informative soundtrack, there was no need for Virgin to include an instruction manual, so they didn't.

CONCLUSION

Musicolor is staggering. Very, very easy to use, it uses the sort of learning process that teaches without you realising it is happening. A very clever and worthwhile package.

THE TOBIN SYSTEM

Candida Tobin's music teaching system, as used in Musicolor, has been recognised as a revelation all over the world, winning her numerous awards and accolades. The system works on simple mnemonics – as music teaching always has – but instead of using phrases such as 'Every Good Boy Deserves Football' to help you remember the stave sequence, the Tobin system uses a mix of colours and easy to remember pictures, such as animals. Using this system, children can quickly grasp the basics of music, giving them a far better foundation for later studies.

VIRGIN £49.99

AMIGA CDTV COMPATIBLE ✓

VIRGIN GAMES, 338A LADBROKE GROVE, LONDON W1. TEL: 081 960 2255

EASE OF USE ♦♦♦♦♦♦♦♦♦♦ **94%**
The few necessary control icons are so simple, the package doesn't have or need an instruction manual.

VALUE FOR MONEY ♦♦♦♦♦♦♦♦♦♦ **84%**
*A superbly priced product, bearing in mind you get **two** CDs for your money, along with a whole pack of related material.*

EFFECTIVENESS ♦♦♦♦♦♦♦♦♦♦ **96%**
The system has already been proved to work, and Musicolor uses it in a very effective way..

FLEXIBILITY ♦♦♦♦♦♦♦♦♦♦ **71%**
It does all it proposes to do, but I would have like to have seen a free composition program, to put your skills into use.

INNOVATION ♦♦♦♦♦♦♦♦♦♦ **93%**
The only other similar package I can think of is The Miracle, but that was limited to piano tuition. Excellent use of the CDTV's capabilities.

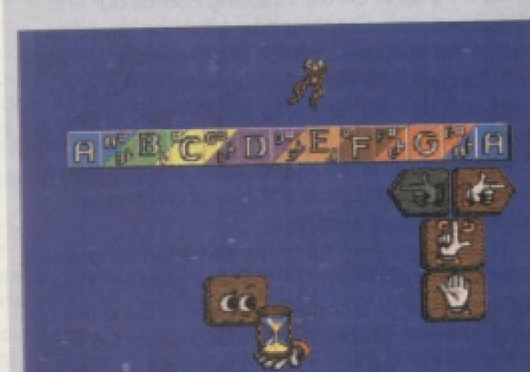
"If you want to learn music, there is no better way to start."

OVERALL 92%

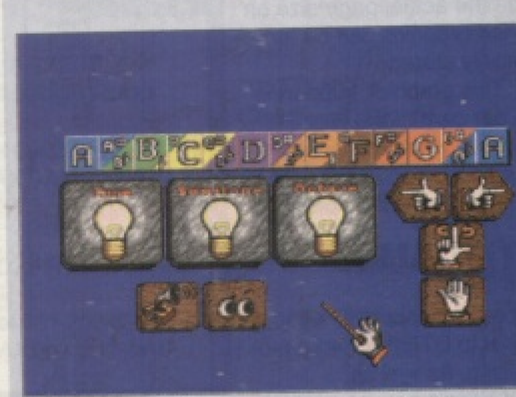
CU AMIGA TOP RATED



The composition screen is where most of the actuly learning takes place. Here you will be taught about chords, passing notes and general composition and key rules.



Included in the box is a Notation strip which, when used in conjunction with the program, will help children to build their own chords.



This lesson is dealing with tones, while helping children to differentiate between notes. Two notes are played, and you have to say whether they were a tone, a semitone or an octave apart.

Derek
come
Dillon
heavy
oment
about
music.

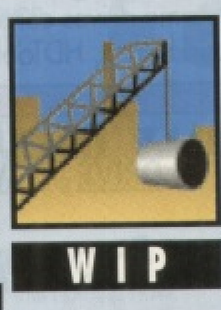
tuly learning
s, passing

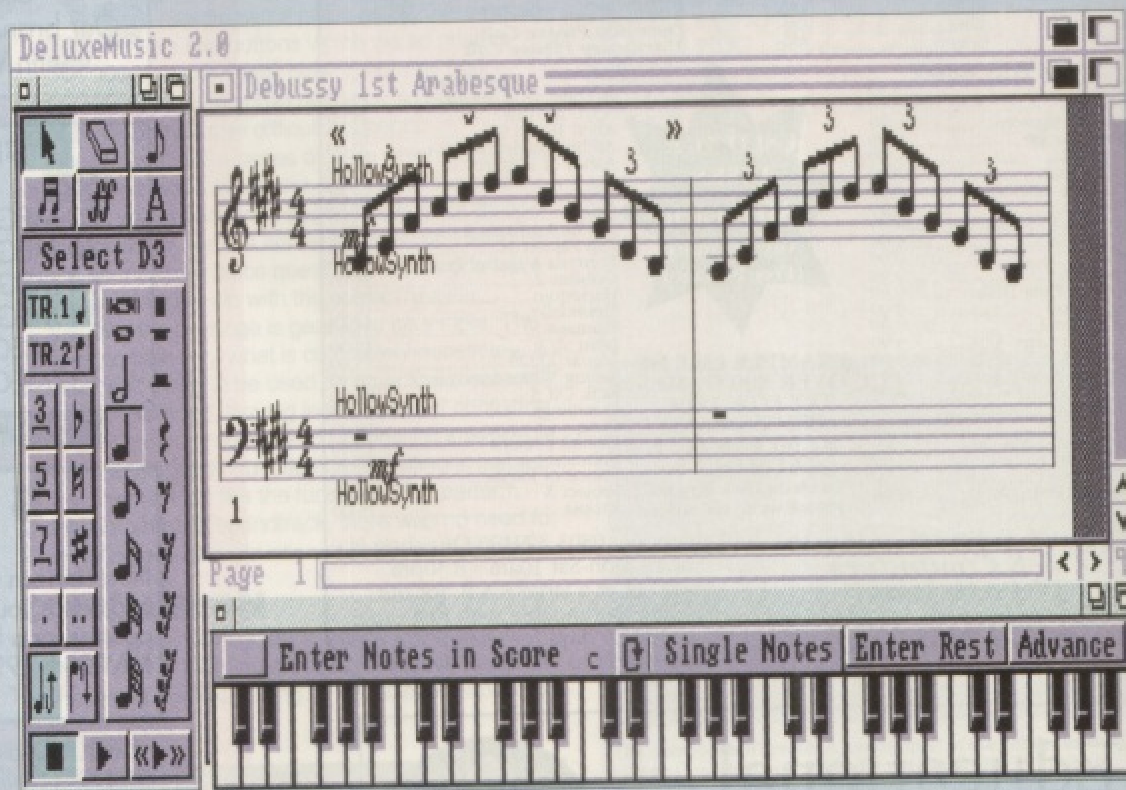
en used in
to build their

hildren to
d, and you
or an

Deluxe Music CONSTRUCTION SET 2.0

With his heart positively beating a tattoo of anticipation, Mat Broomfield visited Electronic Arts to see what has probably been the longest awaited sequel in computer software history.





Although there are very few major alterations to the program, hundreds of small changes ensure that *Deluxe Music Construction Set 2.0* is worth the five-year wait.

Way back in the Amiga's Jurassic era, music packages were few and far between. In fact two programs ruled supreme: *Sonix* and *Deluxe Music Construction Set* (*DMCS*). Although *Sonix* had much to recommend it, *DMCS* stood proudly above the competition, and it still hasn't been beaten.

If you're familiar with the Amiga music scene, you might be wondering how I could make such a bold statement: after all, these days we are spoiled with packages such as *OctaMED*, which lets you play eight internal samples at a time, or *Bars and Pipes Pro*, which has superb sequencing abilities. *DMCS* was never in direct competition with these; it fitted into a niche which it created for itself.

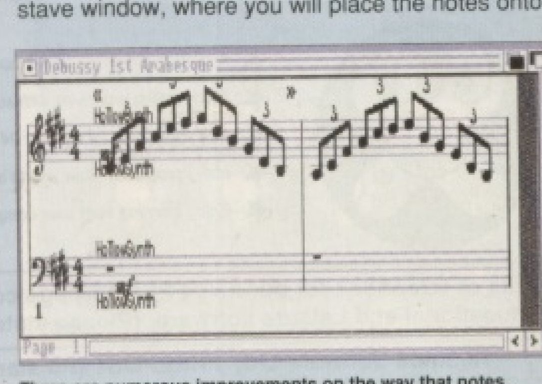
DMCS 2 is a traditional musical notation editor – it lets you create music by arranging notes on a stave rather than by playing in real-time or entering tunes as a sequence of numbers. This has several advantages – you can key in sheet music by copying exactly what appears on the sheet; traditional notation gives a more visual impression of the structure of a piece, allowing you to compose your own music more easily; and your compositions can be printed as ready-to-play scores.

LIMITATIONS

Although *DMCS* could perform some rudimentary MIDI functions, tunes were limited to eight staves which tended to make all but the simplest creations impossible. Now, after a five-year gap, Electronic Arts have finally decided to release an updated version – but is it a case of too little too late?

Although it's not yet complete, this program's pedigree is immediately apparent. The screen colours have been changed from a lurid peach, black and red combination to a much more tranquil mixture of blues and whites which are almost, but not quite, standard Workbench 2.0 colours. In keeping with this new trendy image, all of the buttons and gadgets are now three-dimensional, which makes a great difference, enabling you to quickly identify which selections have been made.

The most important part of this program is the stave window, where you will place the notes onto



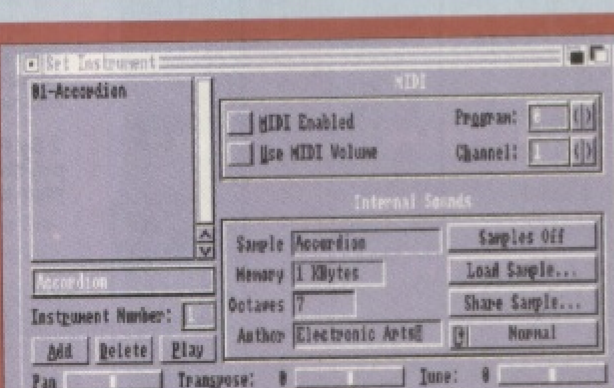
There are numerous improvements on the way that notes appear on the staff, including improved ties and slurs and the ability to perform extended note selection.

INSTRUMENT NAMES

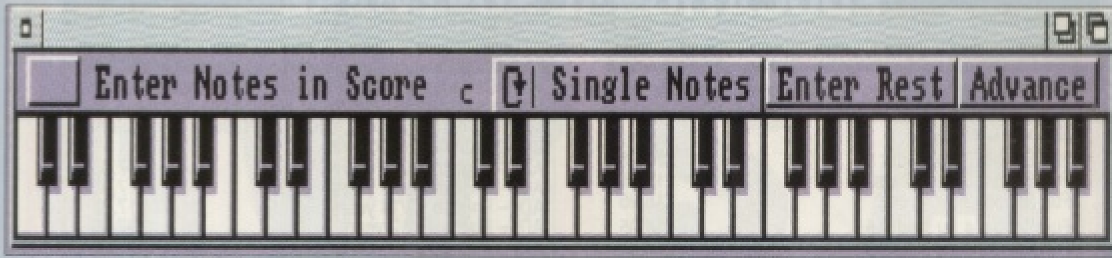
One feature that really impressed me with *Deluxe Music Construction Set 2.0* is the way that instrument names are used. In the new program, samples or MIDI instruments will be assigned to an instrument name, and it is this name that will appear in your score to indicate that a particular section should use that instrument.

For example, supposing that you've loaded in a piano sample, you may choose to attach it to an instrument name of 'Keyboard'. You can now move through your score, specifying the notes that should be played with the keyboard.

If you subsequently decide that you don't like the piano sample and would prefer, for example, a MIDI harpsichord, all that you need to do is to assign the appropriate MIDI instrument to the name 'Keyboard' and it will replace your previous instrument. An additional advantage is that instruments can now be changed anywhere within a bar, not just at its start.

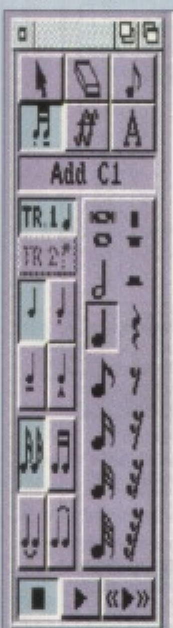


The instrument setup procedure has been improved beyond recognition. The package can handle one to seven octave IFF samples, Raw samples (such as those used in Protracker) and MIDI instruments. Better still, instruments can be changed at any point within a bar or song.



The player piano is still present, but now you can also use it to enter notes onto your score.

individual staffs. This occupies the majority of the visible display and superficially has not been altered. However, one major improvement is the fact that the maximum number of staves has been increased from eight to 48! This means that MIDI users can not only output 48 notes at a time, but they can use a separate staff for each one. This improvement alone is enough to make the program worth buying as this was one of the original's few shortfalls. In fact the maximum level of MIDI polyphony is 48 notes spread over 16 channels.



Not only will there be a new expression mark (accent), but ties and slurs have been iconised so that you can select them from the main screen without having to open any menus.

KEYBOARD

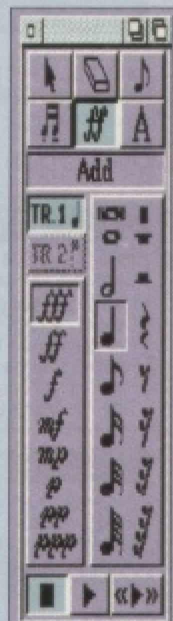
A miniature piano keyboard appears below the stave window. In the original program this showed notes as they were played and it could also be used to try different notes before placing one of them onto a staff. Now notes can be entered into a score directly from this mini keyboard; just play the desired keys and the appropriate notes will appear on your score.

The new version of *DMCS* will contain additional expression marks and abbreviations, including a seven-note tie (septuplet), a double dot, which increases the duration of a note by three quarters, an accent (sforzando), legato, leggiero and portato.

Of course, there's far more to the program than the relatively limited number of options contained in the tool window. There will be eight menus, each packed with options. Although many of these will be familiar to users of the original, the way that they're executed has been vastly improved. For example, when you select Set Instrument, an entire sub-window will open which allows you great control over both sampled and MIDI instruments.

The Set Instrument requester lets you specify the stereo position (pan), the tuning and transposition of all instruments. The pan feature is useful because the old version of the program simply didn't make allowances for stereo output, and consequently notes were simply played out of the left and right sound channels randomly.

One particularly annoying notation restriction in the original package was the fact that it was impossible to define beams surrounding a rest. For example, if a piece of music contained a quaver, a rest and two more quavers, the three quavers couldn't be beamed because the rest interfered with the process. This fault has now been rectified.



DMCS 2.0 will still support a full range of dynamics (volume settings) ranging from PPP (Pianississimo – extremely softly) to FFF (Fortississimo – extremely loud). These can be applied to individual notes or entire groups.

MIDI SUPPORT

MIDI support has been greatly enhanced, and although it isn't a sequencer, it can accept real-time input from a MIDI device such as a keyboard or guitar. It can also perform limited quantisation upon such input. These features weren't implemented in the version we saw, so they have to be taken on trust. However, they're not all that crucial. *DMCS* is a notation package, not a sequencer; if you want extensive real-time input options you are more likely to buy *Bars and Pipes. Deluxe Music* can import standard MIDI files from other sequencers, so it's feasible to buy this package purely for notation editing or printing, and still use a dedicated sequencer for real-time composition.

Surprisingly, *Deluxe Music Construction Set 2.0* only sports a couple of major improvements over its predecessor, although these do make a huge difference. What really counts is that the program contains hundreds of minor (sometimes cosmetic) changes which between them prove that it's the sum of a program's parts that make the difference.

JARGON BUSTERS

- **POLYPHONY** – The maximum number of notes available at one time.
- **MIDI** – Musical Instrument Digital Interface.
- **SAMPLED INSTRUMENT** – A sound recorded and played back by the Amiga's own hardware.
- **MIDI INSTRUMENT** – An external sound source triggered by a sequencer (the Amiga in this case).
- **QUANTISATION** – Corrects bad keyboard technique by pulling recorded notes into time.
- **NOTATION** – Graphic representation of music on a traditional stave.
- **IFF** – A multi-purpose Amiga file format, which when used with samples includes loop points, replay rates and multiple octaves.
- **RAW** – The alternative file format for samples, containing just the sound data, with none of the above features.



ICONS

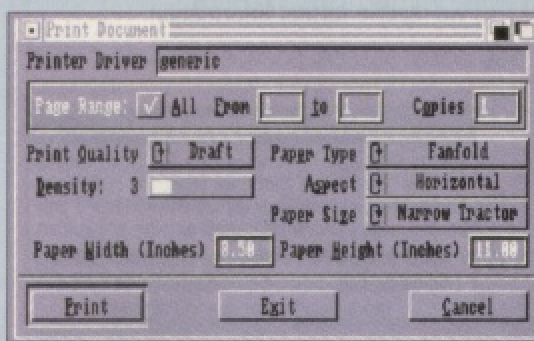
Along the left-hand side of the screen there is a tool window containing graphic representations of the most frequently used functions. In the previous version of *DMCS*, this section was called the 'Note palette' and the two are essentially the same.

At the top of the tool window there are six icons and whenever one of these is selected a new bank of icons will appear that fills up the remainder of the window.

The most important of these will doubtless be the editing icon; this is used to call up the actual notes that you can add to your score. The great news here is that the program now supports 64th notes (hemidemisemiquavers) and double notes (breves).

The addition of these notes and their rests (particularly the 64th note) means that you can now enter more than 99.9 per cent of all written music using the package.

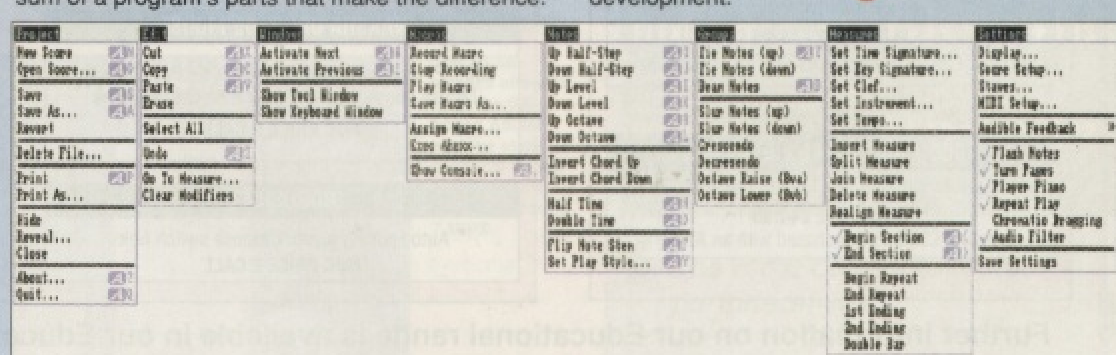
The tool window is equivalent to the note palette but contains far more options including double dots, 64th notes, double notes and septuplets, all of which are mouse selectable.



The print requester on *Deluxe Music Construction Set 2.0* has been updated and improved so that you can now alter most preferences without returning to the Workbench prefs programs. This only confirms that the program is designed for instances where output is important.

Electronic Arts apparently spent a long time performing extensive user research on the previous program to identify every possible shortfall. Although the version I've seen is by no means complete, it is impressive, and I'm going to be at the head of the queue to buy my copy when it comes out.

EA have been releasing great software for so long that it's hard not to get excited about a new release from them. *Deluxe Music Construction Set 2.0* looks as if it's just going to confirm their position at the very pinnacle of Amiga software development.



It's only when you see the vast number of menu options that you can begin to appreciate the program's versatility. Remember, most of these options open further windows! It's important to note that the program can now load and save standard MIDI files which are interchangeable with many industry-standard pieces of software. *DMCS* also uses the Amiga's MIDI device.

GVP's A1230

An accelerator, co-processor and memory upgrade on one card – sounds too good to be true? Tony Horgan investigates.



As well as the 68030 accelerator and 68882 co-processor, this A1230 also has 20Mb of RAM on board.

When Commodore released the A1200, most greeted it with open arms. However, the most common criticism levelled at it was that it wasn't expandable enough. Next to the A500, 2000, 3000 and 4000, the compact 1200 doesn't look like it's got any room for expansion. There are no Zorro ports, so cards made for the bigger machines are incompatible, which means the upgrade options for the A1200 owner can be limited.

Although Commodore have managed to make the 1200 smaller than the old 500, they haven't sacrificed the space given to trapdoor expansions. If you own a 500, or have just upgraded from one, you could be forgiven for thinking that the trapdoor port is only good for simple half megabyte RAM upgrades. On the contrary; for the 1200, it's a gateway to phenomenal computing power.

THREE FOR ONE

GVP's A1230 trapdoor expansion is really three upgrades in one: a 68030EC processor, a 68882 FPU (Floating Point Unit) co-processor, and up to 32Mb of 32-bit Fast RAM. The basic card, at £399, comes installed with 1Mb of RAM, the 68030EC, but no co-processor. The next model up, which costs £599, has an extra 4Mb of RAM and the co-processor. As it fits in the trapdoor, there's no need to open up your machine (doing so would invalidate your warranty), nor to have an expert fit it for you. Just plug it in and you're away.

The 40MHz 68030EC processor boosts the machine's basic speed from the 68020's 1.4 MIPS (Million Instructions Per Second) to around 7.0 MIPS. That's about five times faster than a standard A1200, almost one and a half times faster than a 3000, and over 10 times faster than an A500 or 600. This doesn't mean, however, that all your software will run five times faster than before, because the Amiga's custom chips will still operate at their previous rates. On the other hand, all the bits in between, which are handled by the CPU, will be executed much quicker. Applications tend to run at anything between two to four times the normal rate.

The optional 68882 FPU co-processor accelerates things even further, clocking a rate of 1.14 MFLOPS (Million Floating Point Operations Per Second).

Applications that farm out a lot of work to the custom chips won't benefit as much as programs that rely on software routines. On the games side, it won't make much difference in most cases, but 3D games, such as flight sims, should get quite a boost. The A1230 is in its element when running processor-intensive tasks, such as ray tracing, image processing, sample editing, DTP, animation and general data manipulation.

Depending on the type of software you're running, the practical advantages vary. A ray trace that would have previously taken two or three hours may now only take about 40 minutes.

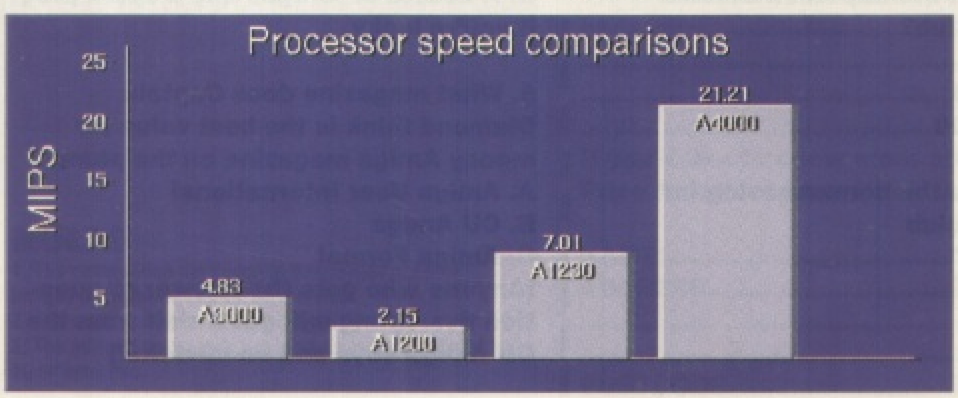
Then there's the extra RAM. It's configured as 32-bit Fast RAM, so you can't normally use it directly for displaying graphics and playing samples, but there's already 2Mb of Chip RAM on the 1200, so that shouldn't be a problem. Amazingly, the card can hold up to 32Mb, which is quite a feat considering its size!

There's also an option to install a shadow ROM. This is a copy of the operating system from the ROM chips, put into 32-bit RAM. If the original ROM was 16-bit, there would be a noticeable increase in speed, but as the A1200 ROM is all 32-bit already, there's little point using it.

CONCLUSION

Unfortunately, the A1230 uses the same port as GVP's imminent combined SCSI Interface and RAM card. At least for the near future, other SCSI interfaces will also use the trapdoor port, which can only handle one card. Also, a switch to disable the card would have been helpful. As it is, if you come up against any compatibility problems, you'll have to remove the card – this isn't really a problem for occasional use, but any regular removal would take its toll.

That aside, the A1230 is hard to fault. Bags of memory, an accelerator and a co-processor can make life so much easier. At the price, it really is quite a bargain, especially when you think what you'd have to spend on an equivalent A3000 or PC.



The A1230 streaks ahead of both the 030-based A3000 and the standard 020-based A1200, with a speed of around 7 MIPS.

G-LOCK £399/£599

A500 ✗ A500+ ✗ A600 ✗ A1200 ✓
A1500 ✗ A2000 ✗ A3000 ✗ A4000 ✗

SILICA SYSTEMS, 1-4 THE MEWS, HATHERLY ROAD, SIDCUP, KENT, DA14 4DX. TEL: 081 309 1111.

EASE OF USE 90%
Just plug it in and that's that. It could do with a disable switch.

VALUE FOR MONEY 81%
Takes your A1200 beyond the power of the A3000 for a fraction of the price.

EFFECTIVENESS 89%
The speed increase varies with different software, but most applications benefit hugely.

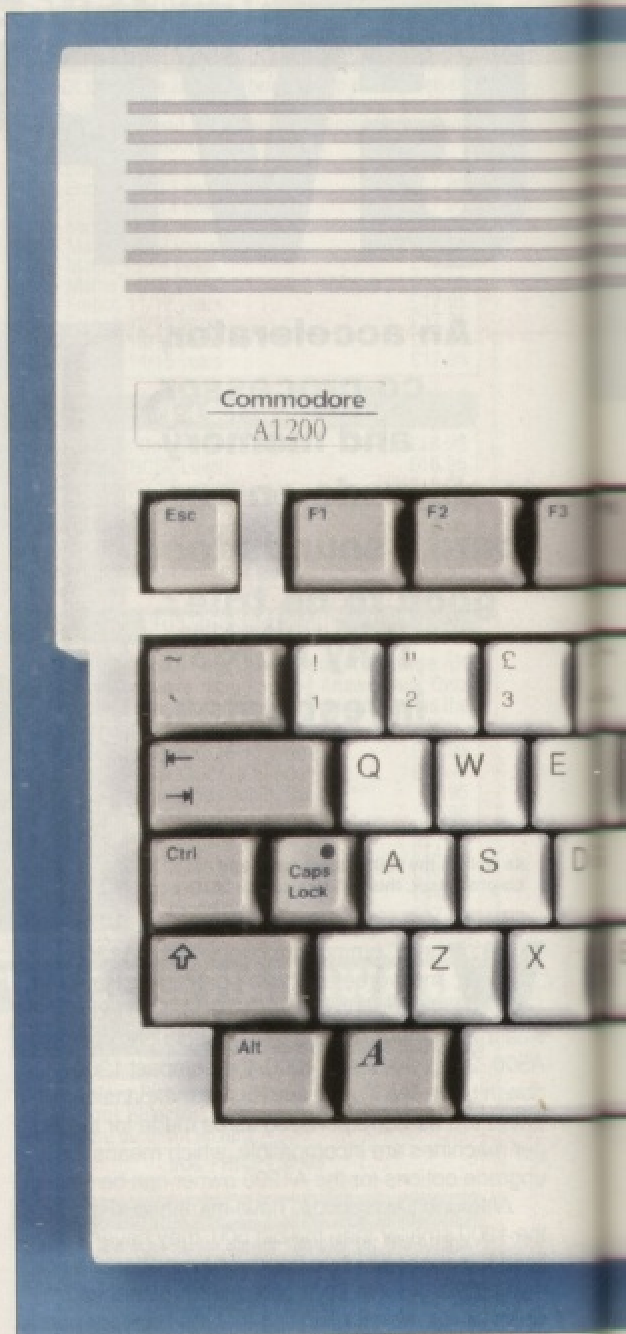
FLEXIBILITY 83%
Available in a number of models, expandable up to 32 b. Suitable for all types of serious applications.

INNOVATION 92%
So much on such a small card! Amazing!

"The most desirable A1200 peripheral yet"

OVERALL 91%

WIN THREE AMIGA 1200s WITH HARD DRIVES



COURTESY OF CAPTAIN DIAMOND & DIAMOND COMPUTER SYSTEMS

Holy Amigas! Captain Diamond's back in the pages of CU Amiga and to celebrate he's come up with a competition that's as super-powered as the Diamond Price Promise. Our muscle-bound hero has given us THREE A1200s to give away and what's more they all come with an 80Mb internal hard drive!

It's generally considered that Commodore's new 32-bit wonder machine is the finest home computer money can buy. There's just never been a machine like it before! And now, thanks to Diamond, a brand new A1200 could be winging its way to you. But these aren't just any old A1200s – they all come with an 80Mb internal hard drive so you can gain instant access to all your favourite games and programs.

So how can you win one of these state-of-the-art home computers? Easy. Just turn to page 99 for the start of this month's Diamond ads, have a good long look at all the amazing offers they've put together, and then answer the five questions we've printed below plus the tie-breaker. All the relevant info you need is included in the DIAMOND ad copy.



QUESTIONS, QUESTIONS...

Printed below are the five questions you must correctly answer to be in with a chance of winning one of the three A1200s we're giving away. Once you think you've got an answer, jot it down on the entry form and send it to CU Amiga. Winners will be the first out of the hat on April 30th.

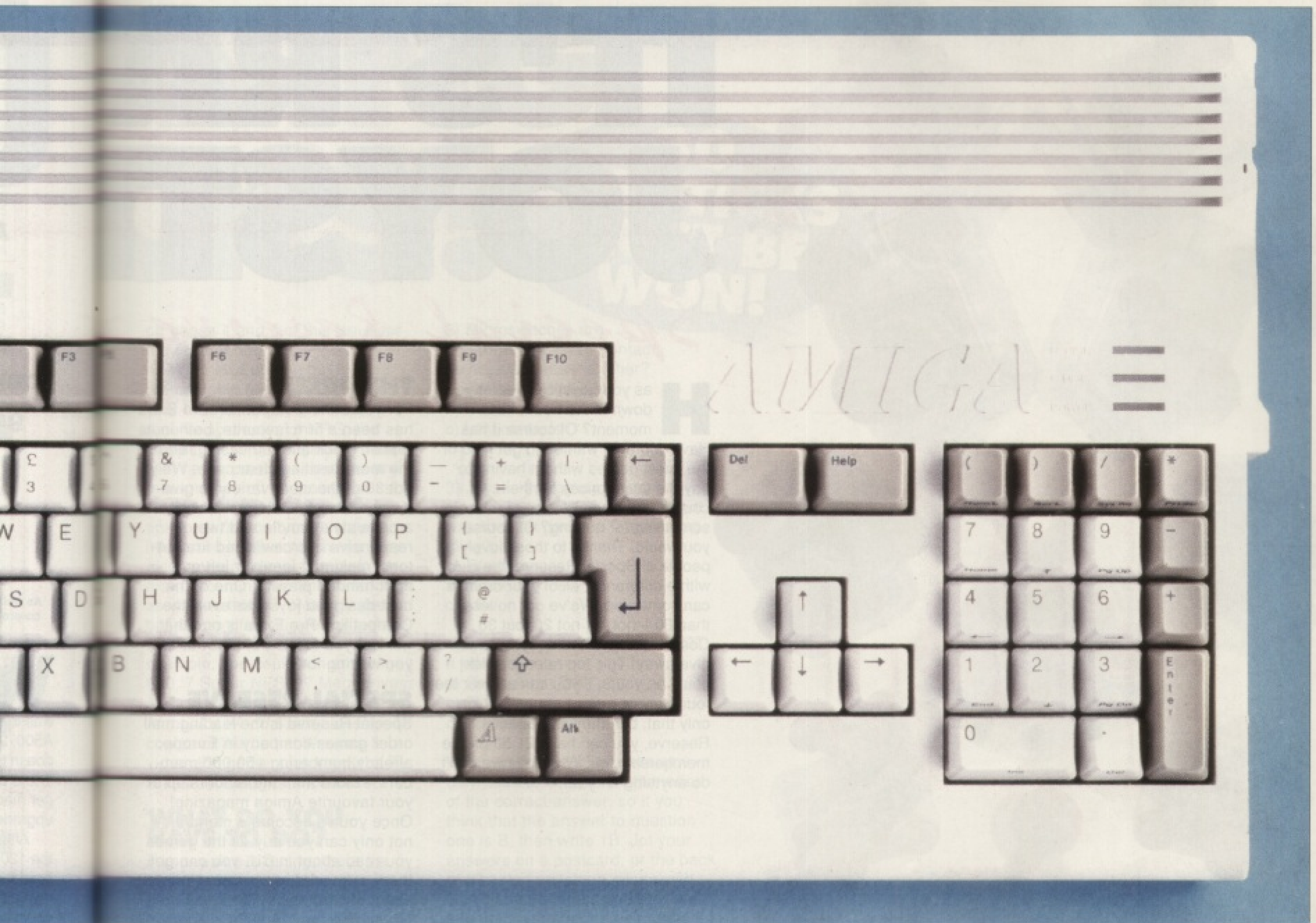
1. Approximately how many members are there in the Captain Diamond Software Club?
A. 25,000
B. 50,000
C. 100,000

2. What is the normal saving for Diamond club members?
A. 25%
B. 15%
C. 5%

3. The Captain has recently opened two new shops – where are they?
A. New York and Paris
B. Slough and Portsmouth
C. MegaCity One and BritCit

4. How many product lines does the Captain endeavour to keep in his stores at any one time?
A. 3,000 lines
B. 1,000 lines
C. A couple of Amigas and a spark plug if you're lucky.

5. What magazine does Captain Diamond think is the best value for money Amiga magazine on the planet?
A. Amiga User International
B. CU Amiga
C. Amiga Format
(Anyone who gets the answer to question five wrong will get a visit from the CU Amiga boys and no mistake!)



d two

e
tores

plug

net?

ues-
the

JUST WHO ARE THESE DIAMOND GEEZERS ANYWAY?

What do you mean you don't know who Diamond are? They're only one of Europe's top Amiga dealers, with a steadily expanding number of shops the length and breadth of the country, that's all. And they now advertise their low, low prices and amazing deals exclusively in the pages of CU Amiga. What's more, they've got the fantastic Diamond Price Pledge which means you can't buy cheaper anywhere else. With over 100 staff and a dedicated engineer in every shop, there's no where better to go when buying an Amiga computer or looking for guidance when it comes to selecting the right sort of peripherals and add-ons. Regarded by many as THE Amiga experts, Diamond offer technical support six days a week. If you'd like to know more about what Diamond have to offer, give them a call on 0703 232 676 or fill in the form on your right, making sure you tick the box for further information.

RULES

1. The competition isn't open to employees of EMAP Images or Diamond Computing Services.
2. The closing date for entries is April 30th 1993.
3. The editor's decision is final and no correspondence will be entered into.

ENTRY FORM

Cut out this coupon and once you've filled it in send it to: Cor Blimey! Captain Diamond's a Right Good Geezer Compo, CU AMIGA, EMAP IMAGES, 30-32 Priory Court, Farringdon Lane, London EC1R 3AU.

Answer One	☐ A	☐ B	☐ C
Answer Two	☐ A	☐ B	☐ C
Answer Three	☐ A	☐ B	☐ C
Answer Four	☐ A	☐ B	☐ C
Answer Five	☐ A	☐ B	☐ C

Hang on a mo! You haven't finished yet – we've got a tie-breaker for you! Just complete the following sentence in no less than 10,000 words.

Tie-breaker: I think the Captain is a diamond geezer because...

...

...

...

If you'd like to know more about Captain Diamond's Software Club and Diamond's Price Promise, please tick this box. [ ]

NAME...

ADDRESS...

...

...

POSTCODE.................................DAYTIME TELEPHONE NUMBER.........................



IT'S RA
JOYST

Special Reserve

Has your joystick ever let you down in the heat of the moment? Of course it has. Have you ever wanted to get hold of the latest games without having to pay the latest prices for them. Of course you have. Would you like something for nothing? Of course you would. Thanks to those lovely people at Special Reserve, the club with a difference, all of your dreams can come true. We've got no less than 30 – not 10, not 20, but 30 Competition Pro Extra joysticks to give away! This top rated joystick could be yours, if you can answer the four easy questions opposite. Not only that, but thanks to Special Reserve, you can have £1.50 off the membership fee. Who says we don't do anything for you!



THE PRIZES

For years the Competition Pro Extra has been a firm favourite, both in its classic black and red casing, and the more exciting clear case. We've got 30 of the clear variety to give away, with a full micro-switched arcade style handle and two responsive microswitched fire buttons, making it ideal for left and right handed players. One of the best designed joysticks ever, the Competition Pro Extra is one that will last you for years, so what are you waiting for?

SPECIAL RESERVE

Special Reserve is the leading mail order games company in Europe, already numbering 150,000 members – more than the readership of your favourite Amiga magazine! Once you've become a member, not only can you buy all the games you read about in CU, you can get them at knockdown prices. How about Microprose's *Formula One Grand Prix* for £14.99? Or *Zool* for £13.99? *Curse Of Enchantia* for £12.99? It's not just games software either, there are ususally loadsa deals to be had on Amiga hardware and other peripherals. The list goes on and on. However, you can only get these discounts if you become a member, but not at the usually reasonable price of £6.99. Thanks to the coupon at the bottom of these pages, we can offer you full membership for just £5.49, provided you order one game when you order your membership. Check the advertisement

RULES OF ENTRY

1. Employees of EMAP Images and Special Reserve can't enter, so that's Tony Horgan's chances blown.
2. Multiple entries are not accepted, so you'll spend lots of money for nothing.
3. The Editor's decision is final and absolute, or so he keeps telling us. No correspondence can be entered into, although Dan does like receiving your lovely letters full of news of the outside world.

AINING TICKS!

30 JOYSTICKS MUST BE WON!



on pages 4 and 5 of this issue for the current offers.

What else do you get for your membership fee? Well, for every year that you're a member, you receive six copies of NRG, the Special Reserve magazine, packed with news, previews, reviews and more money off coupons than is feasibly possible. If, for some unknown reason, you're actually interested in other machines they also cover all the major game formats, including Nintendo and Sega as well as the PC. Not only that, but stacks of exclusive competitions, too. This month, for example, you could win an Amiga 600, 7 Super NESs, 7 Megadrives, an autographed copy of *Nigel Mansell's World Championship*, 10 copies of the Lethal Weapon 3 video and game, plus stacks of T-Shirts and badges! Incredible!

WHAT DO YOU HAVE TO DO?

If your pulse is racing, there's a sweat on your brow and your fingers are itching to get one of those Competition Pro Extras in your grip, merely answer these four simple questions.

1) How many directions can a digital joystick recognise?
a) 8
b) 4
c) 19

2) Microswitches are one form of joystick contact devices. What's the other?
a) Relative Polarisation
b) Guesswork
c) Leaf contacts

3) Joystick waggling is a major force in joystick destruction. What was the first game to feature waggling?
a) *Starglider*
b) *Track and Field*
c) *Med*

4) Which on of the following is NOT a joystick?
a) Competition Pro
b) Zip Stik
c) Arnold Palmer

When writing your answers, you only need to write down the letter of the correct answer, so if you think that the answer to question one is B, then write 1B. Jot your answers on a postcard, or the back of a sealed envelope, along with your name, address and daytime telephone number and send the lot to: MY JOYSTICK DOESN'T WORK ANYMORE SO GIVE ME A NEW ONE, CU Amiga, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. Closing date for all entries is 15th June 1993. Remember, if you don't enter you can't win.

NRG

£1.50 OFF!

This coupon entitles you to £1.50 off when you join and order at least one item from Special Reserve's advert in this issue of CU Amiga (see pages 4-5 for advert). Valid until June 15th 1993. Only one coupon per order.



NEW AMIGA

THE WORLDS MOST POWERFUL

JUST LOOK AT THE UNMATCHED RANGE OF FEATURES

SAVE THE ENTIRE PROGRAM IN MEMORY TO DISK
Special compacting techniques enable up to 3 programs to fit on one disk. Now saves directly to disk as Amiga Dos - reloads independently of the cartridge - even transfer to hard drive! Works with up to 2 Megs of Ram - even 1 Meg Chip Mem (Fatter Agnus).

NEW **SUPER POWERFUL TRAINER MODE-**
now with DEEP trainer. Even better than before - allows you to generate more or even infinite lives, fuel, ammo. Perfect as a Trainer Mode to get you past that "impossible" level. Easy to use.

IMPROVED SPRITE EDITOR
The full Sprite Editor allows you to view/modify the whole sprite set including any "attached" sprites. PLUS A RANGE OF IMPROVED FEATURES.

VIRUS DETECTION
Comprehensive virus detection and removal features to protect your software investment. Works with all presently known viruses.

NEW **BURST NIBBLER**
Now this super disk copier program is built into Action Replay Mk III. Just imagine a superfast, efficient disk copier program at the press of a key - no more waiting.

SAVE PICTURES AND MUSIC TO DISK
Pictures and sound samples can be saved to disk. Files are saved directly in IFF format suitable for use with all the major graphic and music packages. Samples are displayed as screen waveform.

NEW **PAL or NTSC MODES SELECTABLE-**
Useful for removing ugly borders when using NTSC software. (Works only with newer Agnus chips).

NEW **SLOW MOTION MODE**
Now you can slow down the action to your own pace. Easily adjustable from full speed to 20% speed. Ideal to help you through the tricky parts!

MANY MORE INSTANT CLI COMMANDS-
like Rename, Relabel, Copy, etc.

NEW **RESTART THE PROGRAM**
Simply press a key and the program will continue where you left off.

FULL STATUS REPORTING
At the press of a key now you can view the Machine Status, including Fast Ram, Chip Ram, RamDisk, Drive Status, etc.

POWERFUL PICTURE EDITOR
Now you can manipulate and search for screens throughout memory. Over 50 commands to edit the picture plus unique on screen status "overlay" shows all the information you could ever need to work on screens. No other product comes close to offering such dynamic screen handling of frozen programs!!

JOYSTICK HANDLER-
allows the user to select Joystick instead of Keypresses - very useful for many keyboard programs.

MUSIC SOUND TRACKER
With Sound Tracker you can find the complete music in programs, demos, etc. and save them to disk. Saves in format suitable for most track player programs. Works with loads of programs!!

DATEL Electronics LIMITED

HOW TO GET YOUR ORDER FAST!
ALL CHEQUES/POSTAL ORDERS MADE PAYABLE TO....
DATEL ELECTRONICS
GOVAN ROAD, FENTON INDUSTRIAL ESTATE, FENTON,
STOKE-ON-TRENT, ST4 2RS, ENGLAND. FAX 0782 744292
TECHNICAL/CUSTOMER SERVICE 0782 744324

OR CALL AT OUR LONDON SHOP

ACTION REPLAY

MK III

STILL ONLY

£59.99

AMIGA A500/500+

FOR 1500/2000 VERSION £69.99

FREEZER-UTILITY CARTRIDGE

AUTOFIRE MANAGER
From the Action Replay III preference screen you can now set up autofire from 0 to 100%. Just imagine continuous fire power! Joystick 1 and 2 are set separately for that extra advantage!

NEW **IMPROVED RAM EXPANSION SUPPORT**
Now many more external Ram Expansions will work with all Action Replay III commands.

DISKCODER
With the new "Diskcoder" option you can now 'tag' your disks with a unique code that will prevent the disk from being loaded by anyone else. "Tagged" disks will only reload when you enter the code. Very useful for security.

NEW **SET MAP-**
allows you to Load/Save/Edit a Keymap.

PREFERENCES
Action Replay III now has screen colour preferences with menu setup. Customise your screens to suit your taste. Very simple to use.

DISK MONITOR
Invaluable disk monitor - displays disk information in easy to understand format. Full modify/save options.

IMPROVED PRINTER SUPPORT-
including compressed/small character command.

NEW **DOS COMMANDS**
Now you have a selection of DOS commands available at all times - DIR, FORMAT, COPY, DEVICE, etc.

NEW **FILE REQUESTER-**
if you enter a command without a filename, then a file requestor is displayed.

DISK COPY
Disk Copy at the press of a button - faster than Dos Copy. No need to load workbench - available at all times.

PLUS IMPROVED DEBUGGER COMMANDS-
including Mem Watch Points and Trace.

NEW **BOOT SELECTOR**
Either DFO or DF1 can be selected as the boot drive when working with Amiga Dos disks. Very useful to be able to boot from your external drive.

PLUS A MACHINE CODE FREEZER MONITOR WITH EVEN MORE POWER!!

EVEN MORE FEATURES INCLUDING 80 COLUMN DISPLAY AND 2 WAY SCROLLING:-

- Full M68000 Assembler/Disassembler • Full screen editor • Load/Save block • Write String to memory
- Jump to specific address • Show Ram as text • Show frozen picture • Play resident sample
- Show and edit all CPU registers and flag • Calculator • Help command • Full search feature
- Unique Custom Chip Editor allows you to see and modify all chip registers - even write only registers • Notepad
- Disk handling - show actual track, Disk Sync. pattern etc. • Dynamic Breakpoint handling
- Show memory as HEX, ASCII, Assembler, Decimal • Copper Assemble/Disassemble - now with suffix names

REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE WITH ALL MEMORY AND REGISTERS INTACT - INVALUABLE FOR THE DE-BUGGER OR JUST THE INQUISITIVE!

Access VISA SWITCH

24 HOUR MAIL ORDER HOTLINE

0782 744707

ORDERS NORMALLY DISPATCHED WITHIN 48 Hrs.

DATEL Electronics LIMITED

222, TOTTENHAM COURT RD, LONDON, W1. TEL:071 580 6460

17-BIT DISK PRICES

17-BIT DISKS £1.25 EACH
FISH DISKS £1.25 EACH
SCHEME 17 DISKS £2.00
CLR DISKS £3.50 SINGLE
CLR 2 DISK SET £4.50
CLR 3 DISK SET £4.99

GET 1 DISK FREE WITH EVERY 10 YOU BUY! ORDER 20 AND GET 3 DISKS FREE!

ORDERING COULDNT BE EASIER!
WE TAKE ALL MAJOR CREDIT CARDS INCLUDING SWITCH
SO PHONE US NOW ON :-
TEL: (0924) 366982 (2 LINES)
OR FAX: (0924) 200943
FOR SAME DAY DESPATCH!
PLEASE MAKE CHEQUES AND P.O'S PAYABLE TO:
17 BIT SOFTWARE
1ST FLOOR OFFICES, 2/8 MARKET STREET
WAKEFIELD, WEST YORKSHIRE, WF1 1DH

OFFICE HOURS ARE MON-THURS 9.AM TO 8.PM
FRI & SAT 9.AM TO 5.30PM
WE ARE OPEN TO CALLERS MON-SAT UNTIL 5.30 PM

AMIGA PUBLIC DOMAIN FROM 17-BIT SOFTWARE

The UK's leading PD library, over 4000 disks in stock, over 40,000 satisfied customers world wide!
WE STOCK FISH, T-BAG, CLR, AMOS. AND MUCH MORE!
STOP PRESS WE NOW STOCK FISH TO 780 !!

THAT BIT BETTER !!!!!!

17 BIT SOFTWARE Est. 1988

SOFTWARE BARGAINS!

4D Sports Boxing	£ 7.99
Alien Breed Remix	£ 9.99
A320 Airbus	***£26.99***
Assassin	£18.99
Altered Destiny	£ 9.99
Action II Compilation	£ 8.99
Brides Of Dracula	£ 9.99
Cadaver	£ 8.99
Caesar	***£18.99***
Continental Circus	£ 5.99
Chuck Rock	£11.99
Curse Of Enchantia	***£19.99***
Chrono Quest	£ 8.99
Chrono Quest 2	£ 8.99
Chronicles Of Omega	£ 8.99
Deathbringer	£ 9.99
Dune	***£19.99***
Delta Force Comp.	£ 8.99
Die Hard 2	£ 8.99
Double Dragon	£ 4.99
Enchanter	£ 7.99
F16 Combat Pilot	£11.99
Fuzzball	£ 9.99
Flight Of The Intruder	£14.99
Fire Force	***£18.99***
Gates Of Jambala	£ 7.99
Harlequin	***£14.99***
Keys To Maramon	£ 7.99
Lotus III	£17.99
Lure Of The Temptress	***£19.99***
Midwinter II	£12.99
Megalomania	***£11.99***
Moonshine Racers	£ 7.99
Magnetic Scrolls Coll.	£10.99
Mercenary III	£ 9.99
Movie Stars Comp.	£ 8.99
Myth	***£14.99***
Ninja Warriors	£ 4.99
Omnicron Conspiracy	£ 8.99
Pictionary	£ 6.99
Photon Paint 2	£12.99
Project X	£17.99
Putty	***£18.99***
Rennaisance Comp.	£ 6.99
Realms	***£11.99***
Shadow Of The Beast II	£11.99
Silkworm	£ 6.99
Sorceror	£ 7.99
Special Forces	***£14.99***
SWIV	£ 7.99
Superheros Comp.	£12.99
Under Pressure	£ 6.99
Vengence Of Excalibur	£12.99
Warlock	£ 7.99
Wolfchild	£12.99
Zool	***£17.99***

Boulderdash Pack!

10 superb disks full of the classic Boulderdash /Emerald Mine games including an editor to create your own caves! All 10 disks can be yours for £11.50 Including P&P!

SPACE WARS

The dynamic 24 bit raytraced video has arrived. The legendary Tobias Richter presents his most stunning peice of work to date. Supplied on high grade VHS video tape, this 8 minute movie took 5 Amiga A3000's working round the clock a staggering 6 weeks to render! Truly a masterpiece, but dont just take our word for it......

".....Its hard to believe that this is just an animated movie..... If you're after state-of-the-art ray-traced animation or just want to see what the Amiga is capable of you just have to buy this video"
CU AMIGA, Jan 93.

"Wickedly humorous..... This video contains far and away the most impressive animation I have ever seen, period."
AMIGA COMPUTING, Feb 93.

SPACE WARS - THE MOVIE
£11.99 + 75p P&P

CDPD VOLUME #1

The complete collection of Fish disks (to 660) on one packed CD!
Only £19.99 + 75p P&P!

CDPD VOLUME #2

The continuation of the Fish library including the full SCOPE range too!
£19.99 + 75p P&P

DEMO CD VOLUME #1

Thousands of demos, intros, modules, games, anims and clipart all on one mega-CD. Only £19.99
Please include 75p P&P.

MACART PACK

12 Disks packed with images from the likes of Viz, Comic Clipart and loads of other miscellaneous stuff. All 12 disks for £13.00 Inc. P&P

GAMES GALORE

Dozens of games packed onto 12 disks for the kids(and parents!) to enjoy. All 12 disks for the pack price of just £13.00 Inc P&P

CLIPART PACK

Not Macart, but 14 disks crammed with categorised clipart such as people, places, occasions etc. All 14 disks for £15.00 Inc P&P

ASSASSINS PACK

30 disks exploding with over 130 games! Thats enough to keep any games enthusiast busy for a LONG time! £29.99 Inc P&P

COLOUR FONTS

10 disks filled with colour fonts for you to use with your favorite word processor or paint package. Just £11.00 Inc P&P

Ps - FONTPACK

Another 10 disks of very high quality fonts for use with Pagestream 2.0 or Pro-Page v3.0 Take the lot for £11.00 Inc P&P

ACCESSORIES

Disk Boxes (100).....£7.99
Mouse Mats...........£2.99
A500 Dust Covers..£2.99
A600 Dust Covers..£6.99
Zipsticks.............£11.99
Cruiser Joysticks...£9.99
Blank Disks (10)....£6.99

Please Note...

If you are ordering disks by phone, please state wether they are multiple, ie. (abc) after a number means that particular title is on 3 disks. Thanks.

Postage Rates

Please add 50p to all PD orders for P&P
Overseas please add 20% (min £1.00).
If you are buying commercial titles please add 75p per item.

AMFM 10

Includes MIDI for beginners, utils, reviews, music + Loads more.
£2.50 per Issue

CAT DISKS

Are available at 50p each (we now have 4!) or free if a stamped addressed envelope is sent.

GRAPEVINE 13

Full of the usual hot news and articles.
£3.75 (3 disks)

STRATEGY GAME SPECIAL!!

BUY MEGALOMANIA & REALMS TOGETHER FOR THE AMAZING PRICE OF ONLY £21.99!
THATS FAR LESS THAN JUST ONE TITLE WOULD COST AT FULL R.R.P!!! PLEASE INCLUDE 75p P&P

LATEST PD

+2355	Quiz Challenge
+2356	LCD Dreams
+2357	Quiz Master
+2358	MLP Rave Mods
+2359	MLP Mods
+2360	Megacheat V3.0
+2361(AB)	Stolen Data #10
+2362	Techno React 2
+2363	Pyrogenic Mods 2
+2364	Oblivion (Mega!!)
+2365	Cat Woman Slideshow
+2366	Adventure Games Creator
..2367 (1200 Only)	Sleepless Nights
+2368	Owlman Anim
+2369(AB)	Zipbench
+2370	Addressprint v3.0
+2371	Spaceballs State Of The Art
+2372	National Savings Ad.
+2373	World Geography
+2374	Password Paradise (cheats)
+2375	Order Utility
+2376	Cross Over
+2377	The Dart Machine (scorer)
..2378(1200 Only)	WB3 Screens
..2379(AB)	Fairlight Demo
+2380(AB)	Anarchy Legalise It.
+2354	Animation Construction Kit.
+2353	Deluxe Pac Man

JUST IN!! KICK 1.3! ONLY £1.25 RUN 1.3 DISKS ON YOUR 1200!

+2348	Hyperdrive (1.5M)
+2347	Shoot-Em-Up
+2346(AB)	Cult TV Vol 2
+2345	NS #1
+2344	Sanity W.O.C Demo
.2343	Vanish W.O.C Demo
+2341(AB)	Xbench
+2340	Boat Anim
+2339(AB)	The Journey (mega)
+2338(AB)	QL Emulator
+2337	Acid Punk Slides
+2336(AB)	Lawnmower Man Slides
+2335	BootX 5.20
.2334	Grand Prix Manager
+2333(AB)	Thunderbirds Are Gone!
+2332	Escapade
+2331(ABC)	Grapevine 13
+2330	Slideshow Cons Kit
+2329	CED V1.51
+2328	Elevation Game
+2327(ABC)	The AD
+2326	Intrepid
+2325(AB)	Iron Clads
+2324	Textures

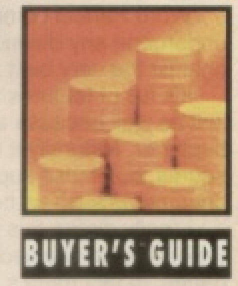
HOBBITS & SPACESHIPS

From the Crusaders Duo comes a new experience in synthesised music. Bjorn "Dr Awesome" Lynne & Seppo "Fleshbrain" Hurme present their first 100% proffessional audio CD. This is NOT recorded Amiga music! It is produced on the best equiptment available and sounds STUNNING when played LOUD!

ONLY £12.99 + 75p P&P

Word Processors

Choosing a word processor can be a confusing business. Mat Broomfield takes a look at some of the best packages that money can buy.

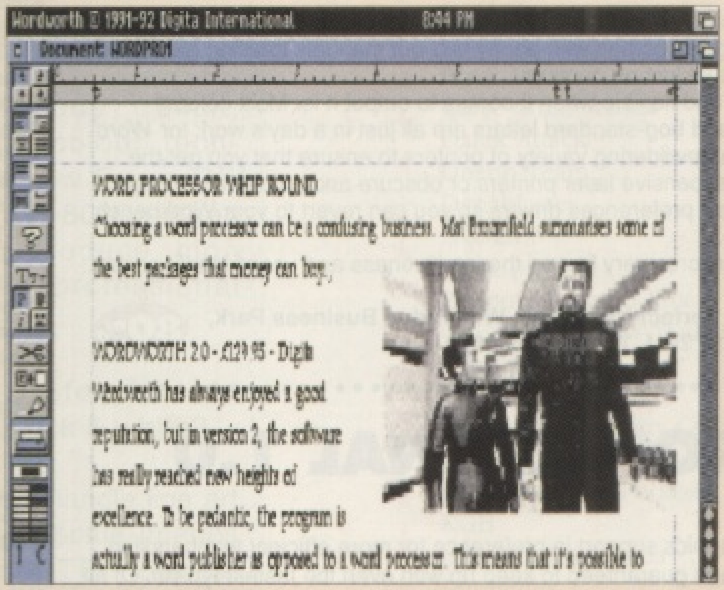


WORDWORTH 2.0

Digita £129.95

Wordworth has always enjoyed a good reputation, but in version 2 the software has reached new heights of excellence. To be pedantic, the program is actually a word publisher as opposed to a word processor. This means that it's possible to include graphics in a document, making the software something of a half-breed, combining elements of both word processors and desk-top publishing packages.

As a word processor, the program is very user-friendly, and it includes a full selection of 'professional' features such as auto-hyphenation and spell checking, and completely definable paragraph and page formats including headers and footers. When it comes to importing graphics, Wordworth 2.0 is adequate, and can handle all pre-A1200 graphics modes and can even import PCX, Postscript and BMP formats as well.



The main strength of the program is the way that it utilises scalable compugraphic fonts to produce jaggy-free text at literally any size. To assist with the output side of things, over a hundred specially written printer drivers are included, and these ensure that virtually every user can get the maximum quality from their printer.

Wordworth requires Kickstart 1.3 or higher and a minimum of 1.5Mbs of RAM in order to operate. For anything remotely complicated, 2 or 3 megs would be preferable.

Contact: Digita International Ltd, Black Horse House, Exmouth, EX8 1JL. Tel: 0395 270273.

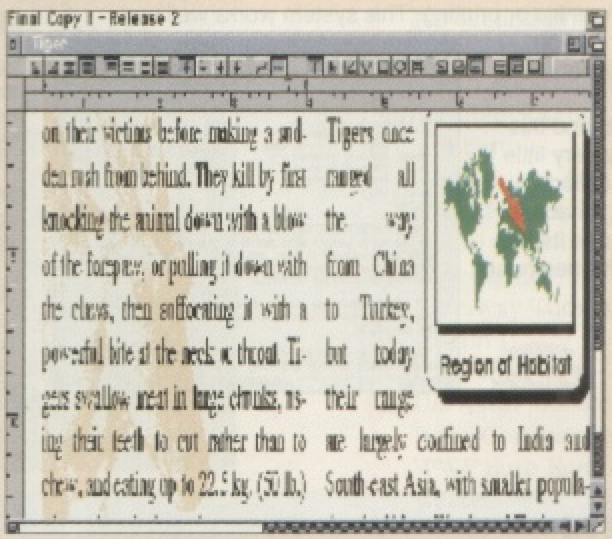
90%

FINAL COPY 2: 2ND REVISION

Softwood Inc. £99.95

Although *Wordworth* is certainly the most popular page publisher for the Amiga, *Final Copy 2* gives it a damn good run for its money, both in terms of features and pricing. Like its rival, *Final Copy* allows you to import any IFF graphics provided they don't use any of the new A1200/4000 modes.

Final Copy also permits you to load 24-bit graphics! This ability tends to highlight one of the strange dichotomies in the program: with its 24-bit picture import, superb postscript output and Adobe type 1 font support, it's clearly targetted at the semi-professional market. This is borne out by the huge range of specialist postscript fonts available for it. However, acting as a fly in the professional ointment, is the fact that *Final Copy* can only import and export text in ASCII format and has no filters to permit file exchange with other industry standard programs such as *Word Perfect.* As a professional user myself, I find this limitation almost unbearable.



Final Copy 2's graphics output and font support just can't be beaten. Its other features are so easy to use that it's the ideal program for word processing newcomers. To my knowledge it's the only W.P. program that supports Adobe, Compugraphic and Postscript fonts.

Well worth a look, especially if output quality is your primary criteria.

Contact: Gordon Harwood Computers, New Street, Alfreton, Derbyshire, DE5 7BP. Tel: 0773 836781.

87%

EXCELLENCE! 3.0

Micro-Systems Software £39.95

Word processors are being developed on the Amiga at breathtaking pace with new packages emerging almost every month. Apparently not wanting to be left out of the fun, Micro-Systems Software (MSS) have developed *Excellence! 3.0.*

To their credit, the original program was one of the first ever page publishers on the Amiga, so MSS have more right to be in the game than most. Judging by *Excellence! 3.0,* they've decided to withdraw from the quality stakes and launch their assault on the basis of aggressive pricing.

Superficially the program looks rather like *Final Copy 2* (*FC2*). The program uses Compugraphic fonts, and it also allows you to include IFF graphics in your documents. However, whereas *FC2* lets you import 16.8 million colour 24-bit images, *Excellence! 3.0* can only manage up to 64 colour extra half-brite screens. To make matters worse, although it uses scalable font technology, printer output of these fonts is pretty dire, totally defeating the object of using such fonts in the first place.

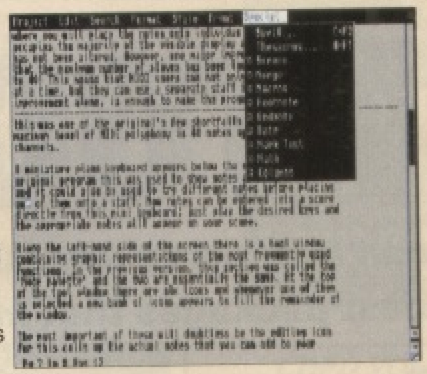
Having said all that, *Excellence!* does have a number of things to commend it, not least of which is its extremely low price tag. It's also unique among the programs reviewed here because it's the only one that includes a grammar checker as well as the virtually obligatory spell checker and thesaurus [*I wondered why your copy was semi-decent for a change! – Ed*]. Grammar checkers can cost hundreds on their own, so you might consider that this is reason enough to buy the package! All in all not too bad for its price.

Contact: HB Marketing, Unit 3, Poyle 14, Newlands Road, Colnbrook, Slough, SL3 0DX. Tel: 0753 686000.

70%

WORD PERFECT 4.12

Word Perfect Corporation £203.83



Despite the fact that graphics support seems to be an increasingly important feature of word processors these days, there is a school of thought which says that graphics should be left to the desk-top publishers and that word processors should get on with their primary objective: manipulating and outputting words.

Word Perfect comes from such a school, and although it hasn't undergone any development of late, it can still hold its head high against the very best Amiga word processors.

It's full of features for those who write professionally, and this is just as well because at over £200 it's certainly not one for the beginner. Naturally it includes such basics as a dictionary and thesaurus, but it also supports multi-column printing and automatic index creation (ideal for longer documents such as books).

I really dislike this package's printing features as making even the simplest changes can be a major task. This isn't helped by the fact that the program comes with poorly laid-out manuals totalling over 750 pages. In fact there's an entire 150 page manual just on printing!

That's not to say that it isn't very powerful and flexible when it comes to output it is. Multi-column newsletters, reports, mail merge documents and bog-standard letters are all just in a day's work for *Word Perfect*. It's supplied with custom drivers for a bewildering variety of printers to ensure that you get the most from your output. Trouble is, they're all expensive laser printers or obscure and outdated dot matrix devices. Fortunately, the program does support preferences drivers so you can revert to your Workbench settings if needs be.

Word Perfect is extremely powerful, but it scores very low on the intuitiveness and user-friendly scales.

Contact: Information Services Dept, Word Perfect UK, Unit 9, Weybridge Business Park, Addlestone Road, Addlestone, Surrey, KT15 2UU. Tel: 0932 850500

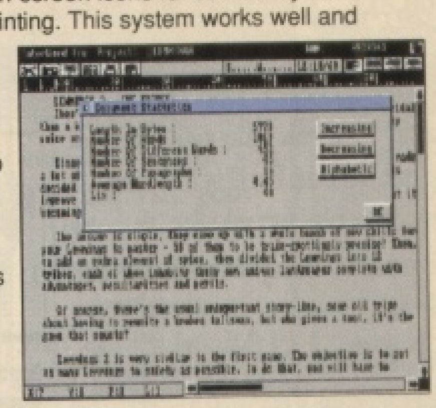
80%

INTERWORD PROFESSIONAL 1.0

Compart UK £49.95

This is another package that foregoes the graphics support in preference for more efficient text handling. *InterWord Professional* is a very stable package guaranteed to keep up with even the fastest typists. Of all the word processors reviewed here, this one seems designed for people who are more concerned about the literary content of their documents than how they appear on paper. It includes a number of analytical and statistical features including something known as the LIX (short for Legibility IndeX) which can be used to determine the approximate comprehension level required to understand a document.

InterWord was one of the first Amiga word processors to use on-screen icons for commonly used functions such as altering a document's justification, saving a file or printing. This system works well and saves you having to hunt through menus all the time. As you would expect, the program has a comprehensive dictionary, but unfortunately doesn't include a thesaurus.



InterWord is refreshingly free of gimmicky features, and this means that it's extremely easy to use because there's very little to confuse you. It's actually part of a four program suite called *InterOffice* and at £49.95 for all four (word processor, database, spreadsheet, comms program), it's price is as spartan as its features. A nice uncluttered program that's perfect both for beginners and those who seek to perfect the craft of writing.

Contact: Compart UK, 20 Guildford Road, Guildford House, St Albans. Tel: 0727 868005.

79%

PUBLIC DOMAIN ALTERNATIVES

All the word processors that I've looked at so far are commercial packages that will cost you at least £39.95. I wouldn't want to give you the impression that printing your letters has to cost a king's ransom. For people operating on a tight budget there are a number of public domain or shareware offerings that'll cost next to nothing.

TEXT PLUS 3.0
Public Domain £1.75

This is probably the most impressive of the PD word processors and compares very favourably to the commercial offerings of only a year or so ago. In appearance it sports a Workbench 2 look and a very uncluttered screen which is not dissimilar to *Protext 5.5*.

The program is very basic in terms of features: it has cut and paste, justification and text styling. Incongruously, *Text Plus* also includes AREXX 'hot links' to *Powerpacker*, *SID* and *Filemaster* so that they can be loaded from menus within the program.

Although not integrated into the software, the program's disk does include a PD spell checker which you can use to give your documents the once over before you print them.

Simple search and replace facilities more or less conclude this program's portfolio. It's worth mentioning that although *Text Plus* is not big on features, it scores highly in terms of user-friendliness and, at only a couple of pounds, who can complain?!

Contact: 17 Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorks, W1F 1DH. Tel: 0924 366982.

50%

TEXT ENGINE 3.4
Public Domain £1.75

With slightly different features to its rival, *Text Engine* is also a fairly simple word processor. This time the emphasis appears to be on output quality rather than document creation. Every conceivable type of text styling is included, ranging from bold and subscript to enlarged and proportional. These are all fine so long as your printer uses the standard Escape codes to activate the different print modes, but if not most of them will be useless to you.

Like *Text Plus*, the program includes basic cut and paste options, but where its rival featured hot-links to other programs, *Text Engine* has macros instead. These can be programmed to perform entire sequences of commands or keypresses at the click of a single mouse button.

The program also features better screen and printing preferences than *Text Plus*, and the screen layout (which is again designed to give that 2.0 look) puts some commercial programs to shame.

Yet again, there is a PD dictionary program included on the disk.

Contact: 17 Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorks, W1F 1DH. Tel: 0924 366982.

69%

FEATURES COMPARISON

	WORDWORTH	EXCELLENCE!	FINAL COPY	WORD PERFECT	INTERWORD	TEXT PLUS	TEXT ENGINE
EASE OF USE	Good	Good	Good	Poor	Best	Good Very	Good
LEARNING CURVE	OK	OK	Good	Very Bad	Very Good	Very Good	Very Good
LAYOUT FEATURES	Very Good	Good	Very Good	OK	Bad	Very Bad	Very Poor
TEXT HANDLING	OK	OK	OK	Best	Very Good	Very Bad	Very Bad
PRINT QUALITY	Very Good	Adequate	Best	OK	OK	OK	OK
PRINT SPEED	Worst	Very Slow	Slow	OK	OK	OK	OK
POSTSCRIPT PRINT	Yes	Yes	Yes	Yes	Yes	No	No
GRAPHICS?	Yes	Yes	Yes	No	No	No	No
	Up to HAM	Up to Half-brite	Up to 24-bit				
SCALABLE FONTS	Yes	Yes	Yes	No	No	No	No
PRICE	£129.95	£39.95	£99.95	£203.83	£49.95	£1.75	£1.75
SCORE	90%	70%	87%	80%	79%	50%	65%

FX DIRECT

FX STAR BUYS

SUPERBASE PERSONAL II RRP £99.99
THE DATABASE THAT'S AS EASY TO USE AS A VCR
FX PRICE £19.99
WHILE STOCKS LAST

BIG BOX 2 RRP £29.99
INCLUDES: BACK TO THE FUTURE III, THE REAL GHOSTBUSTERS, R-TYPE, SINBAD AND THE THRONE OF FALCON, ARMALYTE, DEFENDERS OF THE EARTH, SHANGHAI, BOMBUZAL, 1K + TV SPORT FOOTBALL
FX PRICE £12.99
WHILE STOCKS LAST

FX STAR BUYS

THE GREATEST RRP £32.99
INCLUDES: JIMMY WHITE'S SNOOKER, DUNE AND LURE OF THE TEMPTRESS
FX PRICE £19.99
WHILE STOCKS LAST

THE LOST TREASURES OF INFOCOM RRP £45.99
INCLUDES: ZORK PLANETFALL DEADLINE, INFIDEL, LURKING HORROR SUSPECT, BALLYHOO HITCHIKERS, SUSPENDED STARCROSS, WITNESS, MOONMIST STATIONFALL, ENCHANTER, SORCERER SPELLBREAKER AND OTHERS, IN ALL 20 MYSTERY, FANTASY AND SCIENCE FICTION TEXT ADVENTURES, FOR ONLY
FX PRICE £27.99
WHILE STOCKS LAST

Unit 10, Beaumont Business Centre, Beaumont Close, Banbury, Oxon OX16 7TN
***ORDERS & GENERAL ENQUIRIES, please call:* 0295 252422. FAX: 0295 263991**

AMIGA GAMES

Title	FX Direct Price	RRP
Aliens 3	19.99	29.99
Another World	16.99	25.99
Aquatic Games	16.99	25.99
Archer McCleans Pool	16.99	25.99
Arsenal FC	16.99	25.99
A-Train	24.99	39.99
Bat 2	22.99	34.99
Battle Toads	16.99	25.99
BC Kid	16.99	25.99
Birds of Prey	19.99	30.99
Board Genius	18.99	29.99
Body Blows	17.99	25.99
B17 Flying Fortress	22.99	34.99
Campaign	22.99	34.99
Chaos Engine	16.99	25.99
Chuck Rock II	16.99	25.99
Civilisation	22.99	34.99
Cool Croc Twins	16.99	25.99
Covert Action	22.99	34.99
Curse of Enchantia	22.99	34.99
Daemonsgate	22.99	34.99
Dark Mere	16.99	25.99
Dark Seed	22.99	34.99
Dizzy Collection	16.99	25.99
Dune II	19.99	29.99
Dungeon Mastr/Chaos	19.99	29.99
Dynablaster	19.99	30.99
Elite II	22.99	34.99
Epic	19.99	30.99
Eye of the Beholder II	23.99	35.99
FA Premier league	16.99	25.99
Fantastic Worlds	22.99	34.99
Fire Force	16.99	25.99
Fire & Ice	16.99	25.99
First Samurai/Meglomania	19.99	30.99
Floor 13	19.99	30.99
Formula One Grand Prix	22.99	34.99
Graham Gooch	19.99	29.99
Gunship 2000	22.99	34.99
Harpoon V1.2.1	22.99	34.99
Harrier Assault	22.99	34.99
Hero Quest II	17.99	29.99

Title	FX Direct Price	RRP
History Line	22.99	34.99
Hook	16.99	25.99
Humans	19.99	29.99
Indiana Jones Atlantis Adventure	22.99	37.99
Indiana Jones Atlantis Action	19.99	30.99
John Maddens	19.99	30.99
KGB	19.99	30.99
Kick Off 3	16.99	25.99
Knights of the Sky	22.99	34.99
Knightmare	19.99	29.99
Krusty's Funhouse	19.99	29.99
Legend	19.99	30.99
Legend of Kyrandia	22.99	34.99
Legend of Valour	27.99	39.99
Lemmings II	20.99	30.99
Lemmings Double Pack	19.99	29.99
Lethal Weapon	16.99	25.99
Liberation (Captive 2)	19.99	30.99
Links	32.99	44.99
Lion Heart	16.99	25.99
Lost Treasures of Infocom	27.99	39.99
Lotus III	16.99	25.99
Mega Fortress	19.99	30.99
Microprose Golf	22.99	34.99
Moonstone	19.99	29.99
Nick Faldo Golf	22.99	34.99
Nigel Mansells Championship	19.99	29.99
No Second Prize	16.99	25.99
Oh No Not More Lemmings (add on)	13.99	19.99
Oh No Not More Lemmings (stand alone)	16.99	25.99
Ork	16.99	25.99
Pacific Islands	19.99	29.99
Perfect General	22.99	34.99
Pinball Dreams	16.99	25.99
PGA Plus	19.99	29.99
Pinball Fantasies	19.99	29.99
Player Manager II	16.99	25.99

Title	FX Direct Price	RRP
Populus II	19.99	30.99
Premiere	19.99	29.99
Premier Manager	16.99	25.99
Project X	16.99	25.99
Pushover	16.99	25.99
Putty	16.99	25.99
Ragnarok	19.99	30.99
Railroad Tycoon	22.99	34.99
Raving Mad	16.99	25.99
Reach For The Skies	22.99	35.99
Road Rash	19.99	30.99
Robocop III	16.99	25.99
Robosport	19.99	29.99
Scrabble Deluxe	22.99	34.99
Secret of Monkey Island II	23.99	37.99
Sensible Soccer 92/93	16.99	25.99
Shadow Lands	19.99	30.99
Shadow Worlds	16.99	25.99
Shuttle	23.99	35.99
Silent Service II	22.99	34.99
Sim Ant	19.99	30.99
Sim Earth	22.99	34.99
Sleepwalker	20.99	25.99
Special Forces	22.99	34.99
Storm Master	19.99	30.99
Street Fighter II	19.99	29.99
Striker	16.99	25.99
Super Hero	19.99	30.99
Super Tetris	19.99	29.99
Terminator II	16.99	25.99
The Addams Family	16.99	25.99
The Manager	19.99	30.99
Troddlers	16.99	25.99
Trolls	16.99	25.99
Ultima VI	19.99	30.99
Utopia & Data Disc	19.99	30.99
Vroom	16.99	25.99
Walker	19.99	29.99
Waxworks	22.99	34.99
Wing Commander 1	22.99	34.99
Wizkid	17.99	25.99
WWF II	16.99	25.99
X-Wing	32.99	45.99
Zool	16.99	25.99

PROFESSIONAL SOFTWARE FOR YOUR AMIGA

ACCOUNTS

	FX Direct Price	RRP
Arena Accounts	83.99	117.99
Cashbook Combo	45.99	79.99
Home Accounts 2	35.99	54.99
Personal Finance Manager Plus	29.99	39.99
System 3	38.99	59.99

DATABASES

	FX Direct Price	RRP
Superbase Personal 2	19.99	102.99

MUSIC/SOUND

	FX Direct Price	RRP
Amas 2	64.99	99.99
Audiomaster 4	43.99	59.99
Audio Engineer Plus	159.99	204.99
Bars & Pipes Professional	179.99	299.99
Dr. T's Copy Apprentice	69.99	99.99
Dr. T's KC5 Level 2 V3.5	184.99	279.99
Deluxe Music Construction Set	49.99	69.99
Stereomaster	29.99	39.99
NEW VERSION Technosound Turbo	29.99	39.99

DESKTOP PUBLISHING

	FX Direct Price	RRP
The Publisher	32.99	49.99
Pagestream V2.2	126.99	204.99

HARDWARE/UTILITIES

	FX Direct Price
Amiga 500 Upgrade	23.99
Amiga 500 Plus Work Centre	37.99
Amiga 600 1 Meg Upgrade	37.99
Amiga 600 Work Centre	37.99
Amiga 1200 Work Centre	44.99
Can Do V2	89.99
Cumana External Drive	52.99
Directory Opus V4	49.99
G. B. Route Plus	39.99
Kickstart Rom V1-3	27.99
Kickstart Rom V2-4	34.99
Pyramid Scanner	89.99
Rom Switcher	18.99
Rocgen Plus Genlock	119.99
Screen Beat Speakers	19.99
Quarterback V5	42.99
X Copy V9.2	33.99
Professional Midi Interface	24.99

SPREADSHEETS

	FX Direct Price	RRP
Advantage	69.99	102.99
Maxiplan 4	32.99	49.99

ASSEMBLERS/COMPILERS

	FX Direct Price	RRP
Amos The Creator	30.99	49.99
Amos 3D	21.99	34.99
Amos Compiler	18.99	29.99
Easy Amos	24.99	34.99
Amos Professional	39.99	69.99
Devpac 3	44.99	69.99
Lattice C V6.0	199.99	299.99

ANIMATION/GRAPHICS/ EFFECTS

	FX Direct Price	RRP
Art Department V2.1	129.99	219.99
Director 2	69.99	102.99
Expert Draw	48.99	69.99
Expert 4D Junior	36.99	49.99
NEW Deluxe Paint AGA V4	64.99	99.99
Turbo Print Professional	39.99	49.99
Vidi Amiga 12	74.99	99.99
Broadcast Titler 2	159.99	249.99
Scala 500	69.99	99.99

WORDPROCESSORS

	FX Direct Price	RRP
Interword	19.99	49.99
Mini Office	42.99	59.99
NEW ENGLISH VERSION Penpal V1.4	34.99	49.99
Kindwords 3	32.99	49.99
NEW Final Copy 2	64.99	99.99
NEW VERSION Wordsworth V2	74.99	129.99

ACCESSORIES/PERIPHERALS

	FX Direct Price
10 Blank Bulk Disks	4.99
25 Blank Disks	11.99
50 Blank Disks	20.99
100 Blank Disks	39.99
3.5" 100 Capacity Disk Box	5.99
Amiga Mouse Mat	2.50
Amiga Dustcover (500)	3.99
Amiga Dustcover (600)	3.99
Amiga Replacement Mouse	9.99
Cruiser Multicoloured Joystick	5.99
Fighter Joystick	4.99

EDUCATIONAL SOFTWARE

EDUCATIONAL

	FX Direct Price
Funschool 4 under 5	16.99
Funschool 4 between 5-7	16.99
Funschool 4 between 7-11	16.99
Funschool Specials:	
Merlin Maths (7-11)	16.99
Spelling Fair (7-13)	16.99
Paint & Create (over 5 yrs)	16.99
Adi Range:	
Adi Maths 11-12yr – 12-13yr	16.99
Adi Maths 13-14yr – 14-15yr	16.99
Adi English 11-12yr – 12-13yr	16.99
Adi English 13-14yr – 14-15yr	16.99
Adi French 11-12yr – 12-13yr	16.99
Adi French 13-14yr – 14-15yr	16.99

EDUCATIONAL

	FX Direct Price
Kosmos Range:	
Answer Back Senior (12-Adult)	14.99
Answer Back Junior (6-11yr)	14.99
Fact File 500's (Require Answer Back Junior to Senior to Work)	
Fact File 500 Arithmetic (6-11yr)	8.50
Fact File 500 Spelling (6-11yr)	8.50
Fact File 500 World Geography (12-Adult)	8.50
Fact File 500 General Science (12-Adult)	8.50
Maths Adventure	16.99
Kosmos Languages:	
French Mistress (All ages)	14.50
German Master (All ages)	14.50
Spanish Tutor (All ages)	14.50
Italian Tutor (All ages)	14.50

EDUCATIONAL

	FX Direct Price
LCL Range:	
Micro English (8 – GCSE)	18.95
Micro Maths (8 – GCSE)	18.95
Micro French (8 – GCSE)	18.95
Micro German (8 – GCSE)	18.95
NEW Micro Science (8 – GCSE)	18.95
Mega Maths (A-Level Course)	18.95
Primary Maths Course (3-12)	18.95
Reading/Writing Course (3-8)	18.95
Miscellaneous Software:	
Compendium Six (4-12)	29.99
Better Maths (12-16)	14.99
Noddy's Playtime	17.99
Magic Maths (4-8)	14.99

HOW TO ORDER

PLEASE Charge my Access/Visa/Switch No . . . . Expiry Date: . . . . Switch Issue No: . . . .

ORDER FORM
PLEASE SUPPLY ME WITH THE FOLLOWING

TITLE	PRICE
P&P	
TOTAL ENCLOSED	

DATE. . . . .
NAME. . . . .
ADDRESS. . . . .
. . . .
. . . .
. . . .
POSTCODE. . . . .
TEL: . . . .

PLEASE MAKE CHEQUES AND POSTAL ORDERS PAYABLE TO FX DIRECT AND SEND TO THE ADDRESS ON OPPOSITE PAGE.
PLEASE ALLOW CHEQUES TO CLEAR.
E&OE.

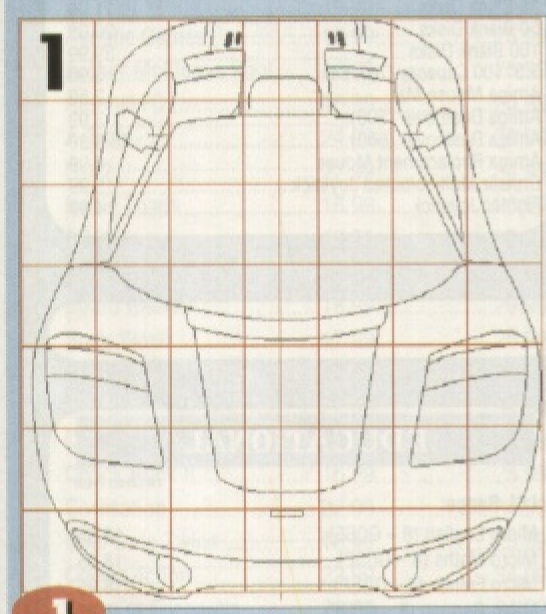
SOME OF THE ITEMS FEATURED MAY NOT BE RELEASED AT TIME OF GOING TO PRINT, BUT WILL BE DESPATCHED AS SOON AS THEY BECOME AVAILABLE.

UK ONLY PLEASE ADD £1.25 FOR THE FIRST ITEM AND AN EXTRA 50P FOR EACH ADDITIONAL ITEM. NEXT DAY DELIVERY AVAILABLE AT £4.99 PER ORDER. (OVERSEAS ORDERS WELCOME P&P DEPENDENT ON DESTINATION).

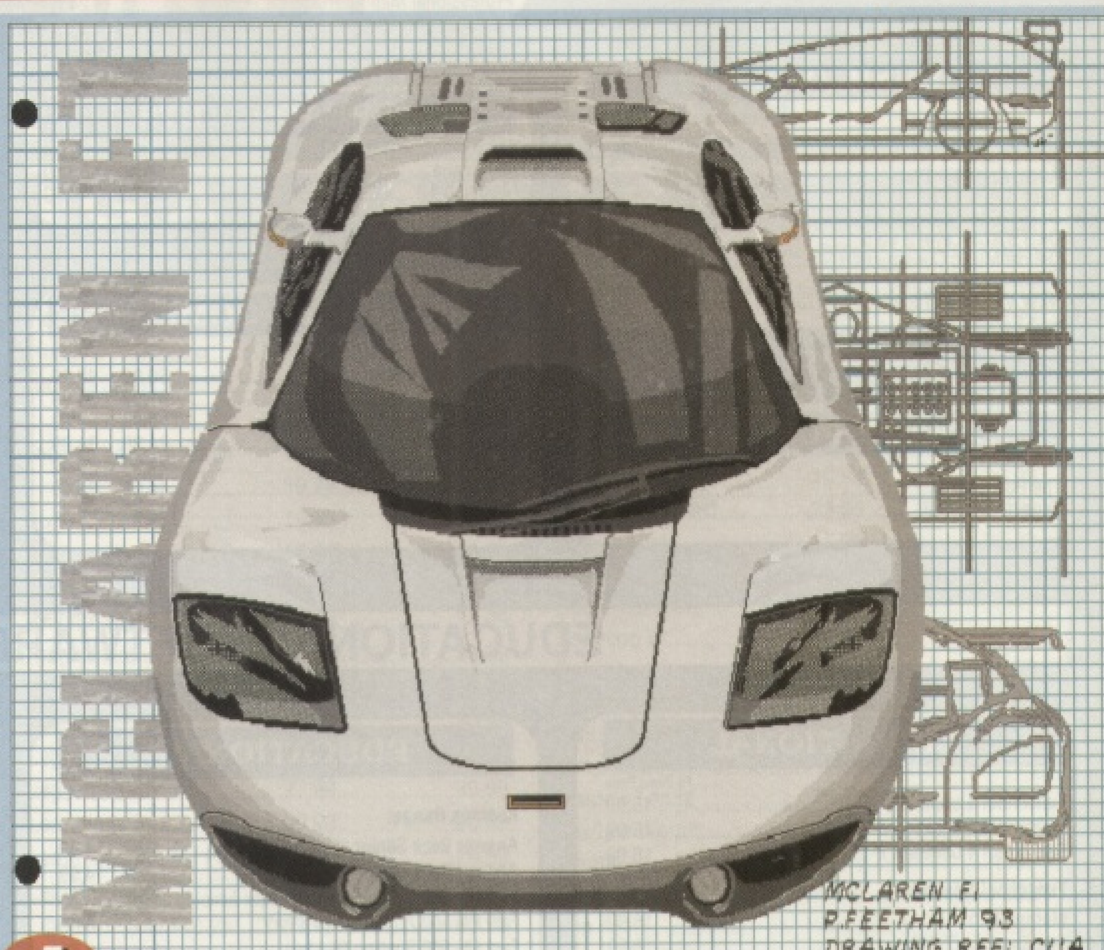
ART GALLERY

The sun is shining and the sky is blue. What better time to put mouse to art package and come up with a masterpiece! Here's Tony Dillon with this month's selection for your perusal...

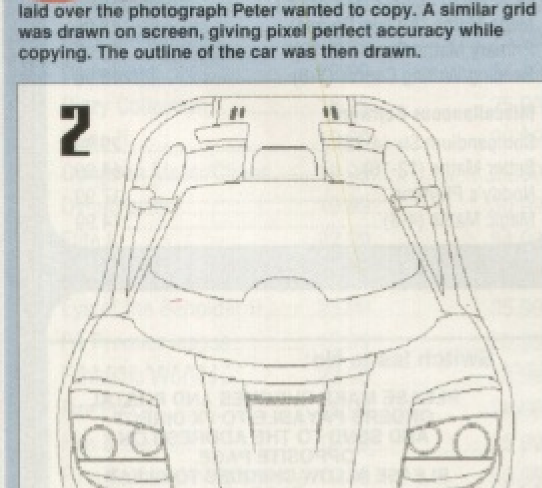
F1 STREET LEGAL This month's 'Steppenwolf – Get That Motor Running' Award goes to Peter Feetham of Chaddesden for his cool looking Maclaren, drawn on his 3Mb A2000 with *Deluxe Paint 3*. Bet you wish you weren't sat on the bus.



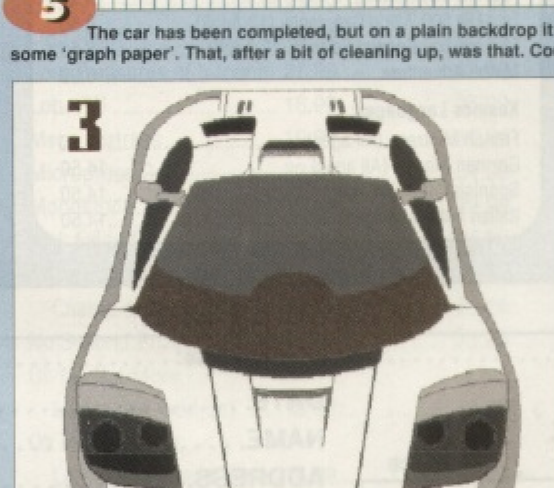
1 A grid was drawn onto a sheet of acetate and then laid over the photograph Peter wanted to copy. A similar grid was drawn on screen, giving pixel perfect accuracy while copying. The outline of the car was then drawn.



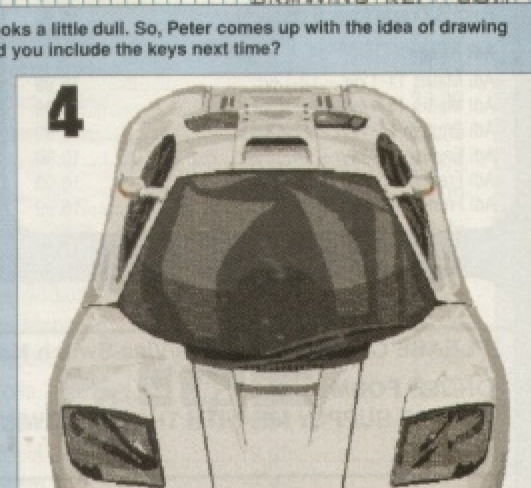
5 The car has been completed, but on a plain backdrop it looks a little dull. So, Peter comes up with the idea of drawing some 'graph paper'. That, after a bit of cleaning up, was that. Could you include the keys next time?



2 With the outline in place, the grid was withdrawn and the edges tidied up, leaving Peter with acres of room with which to work out his palette



3 3The basic colours were added to the picture, and some of the simpler shading. One of the more tedious tasks..



4 Shading and highlights are used to give more depth, Peter used the magnification mode to be totally accurate. He spent four hours working on this dream machine.

THE FEW Schnell! Schnell! Die, Englander Pig Dog! God, this takes us back to the days of reading Warlord alright. This collage of Sixties war images was pieced together by M. Davies of Bridgend. Chocks away!



1 The drawing was initially done in free-hand, using nothing more than a grey backdrop and black ink. Rather than draw lines, the outline was drawn a dot at a time – time consuming but the end result is flawless



2 Next the outline was filled in block colours. The detail is fairly low at this point, but already you can see the comic book effect.



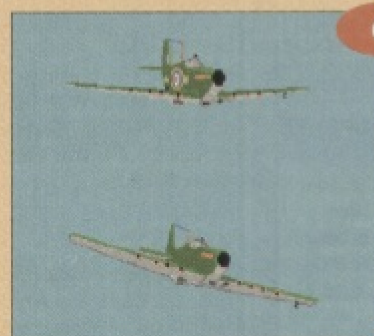
3 These two images were drawn in the same way as the main picture – with slow but effective outline work followed by block colouring.



4 The extra images have now been picked up as brushes and placed onto the main screen, giving you some idea of how the picture will piece together. It still looks a little too cartoony so...



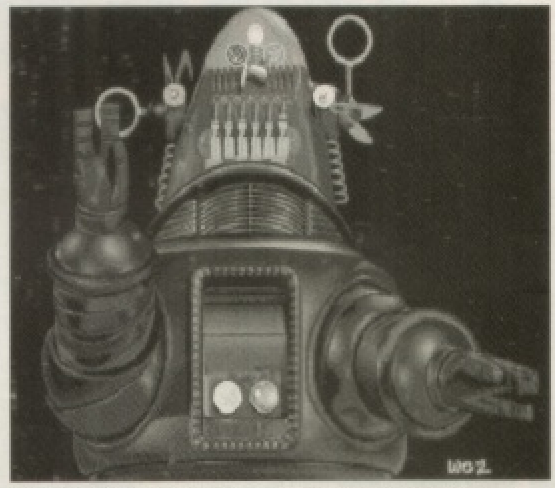
5 More detail is added. Using the magnify tool, darker shades have been placed in key areas to add shadow and contours to the image.



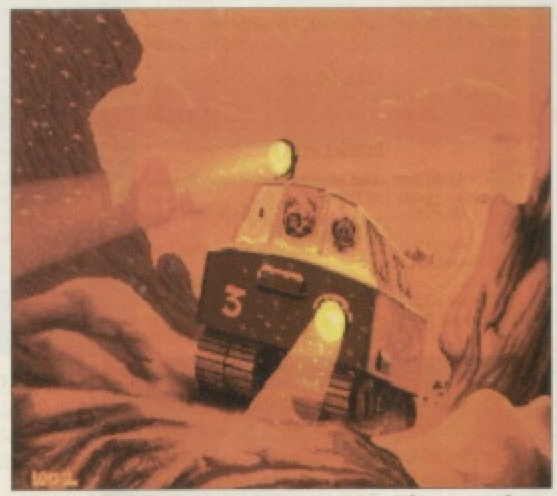
6 This Spitfire was also drawn in the same way as before. Mr. Davies didn't have any pictures of Spitfires to hand, so he went out and bought an Airfix kit and built a model to work from!



7 The final picture. The Spitfire has been rescaled and dropped in and the whole picture has been touched up. Crikey Skip, you can almost smell the Jerries.



ROBBIE THE ROBOT Danger, danger. How many times have we used this picture in the past? Obviously not enough, because here's Warren Kelling with his rendition of this classic Sci-Fi shot.



EXPLORER 3 It's Warren Kelling again with a pretty good example of how subtle shading can be used to its best. By using a few colours, but half a dozen shades, Warren has managed to create a realistic and intricate backdrop for his moon exploration shot, based on a picture by David Hardy.

WRITE NOW

If you've come up with some artwork that you feel should be hanging in the CU Gallery, please make a note of the following points before sending anything in for inclusion.

- Include a selection of IFF files showing your picture in various stages of construction, as well as the finished picture.
- Include a stage by stage description of how you created your masterpiece on a sheet of paper, NOT a document file on the disk.
- If your drawing is based on the work of another artist, then include their name and the name of the artwork, along with where you saw the copy you worked from.
- Disks bearing drawings featured in the Gallery will be retained by CU. If you would like your disk returned, please include a stamped addressed envelope (taking into account the weight and fragility of computer disks).
- When posting your disk to us, remember to write 'MAGNETIC MEDIA – DO NOT X-RAY' on both sides of the envelope, to ensure the disk isn't corrupted in transit.

A copy of the magazine in which work is displayed will be sent to all featured artists.

Send your disks to: CU Gallery, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

COMMODORE ATARI CITIZEN STAR AMSTRAD CUMANA PHILIPS GOLDEN IMAGE NAKSHA ABACUS SEGA DIGITA

ZYDEC GOLDSTAR HEWLETT PACKARD TOSHIBA CANON EPSON MITSUBISHI JVC PANASONIC DIGITA SEGA ABACUS NAKSHA GOLDEN IMAGE

Orders Taken Until

DISKS...DISKS

Phone for latest Prices

DOUBLE SIDED DOUBLE DENSITY BULK DISKS FULLY GUARANTEED & INCLUDING LABELS.

20 DSDD	£10.99
25 DSDD	£14.29
50 DSDD	£25.29
100 DSDD	£45.99
200 DSDD	£89.99
20 TDK Branded Disks	£19.99

DISK BOXES

Flip Top Disk Holder holds 12 .... 99p

Flip Top Disk Holder holds 20 .... £2.99

40 Disk Holder, Lockable, Top Quality, Anti-static, with Dividers & 2 Keys £3.99

80 Disk Holder, Lockable, Top Quality, Anti-static, with Divider & 2 Keys £5.99

DISKS & DISK BOX OFFERS

Pack of 20 in our Top Quality, Lockable 40 Disk Holder £14.75

Pack of 50 in our Top Quality, Lockable 80 Disk Holder £30.00

FILE DRAW

Drawer Type Box - Holds 100 disks, lockable, stackable. TOP QUALITY £10.99

POSSO BOX

Drawer Type Box - Can be stacked horizontally or vertically - Holds 150 Disks £16.45

DISK LABELS

Four Assorted Colours
60 for £1.00
200 for £2.00
200 Tractor Feed Labels £4.00

AMIGA 1500/2000 PERIPHERALS

G.V.P 42Mb Fast Access Hard Drive with 8Mb Unpopulated RAM board £294.99

G.V.P 80Mb Fast Access Hard Drive with 8Mb Unpopulated RAM board £334.99

G.V.P 120Mb Fast Access Hard Drive with 8Mb Unpopulated RAM board £414.99

G.V.P A1500/A2000 8Mb RAM board populated with 2Mb RAM £159.99

2Mb SIMMS to fit the above GVP's .... £59.99 (fitted FREE if required)

AMIGA CONTROL CENTRES

These are the original and best. Manufactured by Premier Micros from Sheet Steel with welded seams and Epoxy coated to colour match the Amiga. Precision made to fit over the back of the Amiga to make a perfect platform for a monitor, improve the looks of the Amiga and provide space for a second drive etc.

A500/A500 Plus Model £39.95
A600 Model £34.95
Amiga 1200 Model £39.95

DUST COVERS

Top quality Amiga Colour Dust Covers, Tailored, Monogrammed and with Bound Edges.

Protect Your Investment

Amiga 500 Keyboard	£4.99
Amiga 600 Keyboard	£4.99
Amiga 1200 Keyboard	£4.99
Citizen Swift Printers	£4.99
Commodore Monitor	£4.99
Philips Monitor MK II	£4.99
Amiga 1500 Two Part Cover	£8.99
Star LC20 Printer	£4.99
Star LC100 Printer	£4.99
Star LC200 Printer	£4.99
Star LC24/200 Printer	£4.99
Amiga 500 with Control Centre & Monitor Combined Cover	£8.99
Amiga 600 with Control Centre & Monitor Combined Cover	£8.99
Amiga 1200 with Control Centre & Monitor, Combined Cover	£8.99

DISK DRIVES & EXPANSIONS

ZAPPO DISK DRIVE, Slim Line Design, quiet, low power consumption, through port & on/off switch £54.99

CUMANA CAX354 1Mb 3.5" Single disk drive - Enable/Disable switch - Thru port - Power ex Amiga £54.99

REPLACEMENT A500 Internal Disk Drive, fully compatible and with full instructions £46.99

MEMORY EXPANSIONS & SYSTEM UPGRADES 512k RAM Expansions with Clock and On/Off Switch £26.99

COMMODORE A501 PLUS - 1Mb module for A500 plus gives 2Mb Chip Memory £29.99

COMMODORE A601 - Amiga A600 1/2Mb Ram Expansion - gives 1.5Mb Chip Memory .. £27.99

AMIGA 600 - 1Mb Chip RAM Module with clock, plugs into trapdoor underneath the A600 .... £44.99

SMART CARDS FOR PCMA SLOT IN AMIGA A600 and A1200
2Mb Ram Expansion Card £114.99
4Mb Ram Expansion Card £179.99

MICROBOTICS MBX 1200 Unpopulated 32 Bit Ram Expansion with 14Mhz 68881 Maths Co-processor. For A1200 .... £149.95
1Mb SIMM for MBX 1200 .... £72.95
2Mb SIMM for MBX 1200 .... £132.95
4Mb SIMM for MBX 1200 .... £229.95

SUPRA 2400 PLUS FAX/MODEM
Enables you to tap into Hundreds of Bulletin Boards and download free software. Also acts as Fax machine. Includes Software, Leads and Power Supply £139.99

MONITORS

PHILIPS CM8833 MKII Stereo Colour High Resolution Monitor with FREE Lotus Turbo Challenge 2 Game and One Year On-Site by Philips Engineers £219.99

Amiga Stereo Sound and RGB Connecting Cable for above £9.99

Genuine Philips Tilt & Swivel Stand .£16.99

Tailored Dust Cover £4.99

AMIGA 500 HARD DRIVES

G.V.P. 42Mb Fast Access Hard Drive with 8Mb Unpopulated RAM board £294.99

G.V.P. 80Mb Fast Access Hard Drive with 8Mb Unpopulated RAM board £364.99

G.V.P. 120Mb Fast Access Hard Drive with 8Mb Unpopulated RAM board £484.99

2 x 1Mb SIMMS for above (Free fitting) £59.99

G.V.P. COMBO 40Mhz Accelerator Plus 120Mb Hard Drive Plus 8Mb RAM board all in one case £874.99

4Mb SIMM for above (fitted free if required) £169.99

ZAPPO A500/A500+ Hard Drives - take up to 8Mb of 1Mb Simms, mouse operated Games Switch, SCSI through port, 12 month warranty.

ZAPPO A500/40Mb Hard Drive £269.99

ZAPPO A500/60Mb Hard Drive £319.99

2 x 1Mb Simms for above (FREE fitting) £59.99

COMMODORE AMIGA SYSTEMS

COMMODORE AMIGA A600 PACKS

PACK ONE

AMIGA A600 FD BASIC PACK
New Compact Design - Kickstart/Workbench 2.05, plugs directly into any T.V. 1Mb RAM, Smart Card Slot, 3.5" Built in Disk Drive. Complete with Mouse and PSU. 12 months in-home service £254.99

PACK TWO

EXCLUSIVE - AMIGA A600 FD with 1.5Mb RAM. As above fitted with Commodore A601 Ram Expansion (with clock) giving a total of 1.5Mb chip RAM £274.99

PACK THREE

AMIGA A600 - 20Mb HD PACK
AS PACK ONE PLUS a 20Mb built in hard disk drive, installed with Workbench 2.05 .... £324.99

PACK FOUR

The Wild, The Weird & The Wicked.
AS PACK ONE, With Deluxe Paint III. GRAND PRIX by Microprose, PUTTY by System 3, PUSHOVER by Ocean and Deluxe Paint III £294.99

PACK FIVE

EPIC/Language Lab, Hard Drive Pack.
AS PACK ONE, with Trivial Pursuit in three different languages, Amiga Text, word processor, EPIC by Ocean, ROME by Millenium, and MYTH by System 3 .... £354.99

PACK SIX

Home Office Pack
The complete all in one package for your home or business. Commodore Amiga 600 as PACK ONE with word processor, 50,000 word spell checker, database, spreadsheet with graphics, disk manager £294.99

COMMODORE AMIGA A1200

32 bit graphics, Kickstart/Workbench 3.0, plugs directly into any T.V. Smart Card slot, 2Mb chip RAM, 3.5" built in disk drive. Complete with Mouse and PSU. 12 Months In-Home Service with FREE SLEEPWALKER GAME £394.99

ESSENTIAL ACCESSORIES PACK

Top quality 40 disk storage box, 10 best quality disks with labels, mouse mat, tailored monogrammed dust cover, SPECIAL PRICE £21.99 or £19.99 when purchased with any Amiga system.

PRINTER RIBBON RE-INK

Simply open your plastic ribbon case, spray over the ribbon, replace the lid and leave for 24 hours.

BETTER THAN A NEW RIBBON

Guaranteed - Restores dozens of ribbons to new for just £11.99

PRINTERS

FREE STARTER KIT (WORTH ALMOST £20) WITH ANY OF OUR PRINTERS
Comprising:
* 200 SHEETS OF QUALITY PAPER
* 200 SHEETS OF CONTINUOUS PAPER
* 1.2 AMIGA PRINTER CABLE
* SPECIAL AMIGA DRIVERS DISK to match your Amiga perfectly to any of our printers.

COMMODORE MPS 1270A INK JET PRINTER - Swift and silent, Dual interface for both Commodore 64 and Amiga compatible, FREE Starter Kit £99.99

SEIKOSHA SP1900 PLUS
9 Pin dot matrix, mono, 2 high quality fonts, 192cps, 1Kb buffer, 144 x 240 dpi graphics, including FREE Starter Kit £134.99

SEIKOSHA SL-90
24 Pin dot matrix, mono, 2 letter quality fonts, 240cps, 20Kb buffer, 360 x 360dpi graphics, FREE Starter Kit £174.99

SEIKOSHA SL95
Colour, 24 pin dot matrix, 9 fonts, 43Kb buffer, 360 x360 DPI graphics. FREE Starter Kit, 1 years on-site warranty £234.99

CITIZEN SWIFT 200
24 Pin dot matrix, quiet, colour, 6 letter quality fonts, 216cps, 8Kb buffer, 2 year warranty, FREE Starter Kit £219.99

CITIZEN SWIFT 240c
24 pin dot matrix, colour, quiet, 9 letter quality fonts, 2 scalable fonts, 240cps, 8Kb buffer, 2 year warranty, FREE Starter Kit £269.99

CITIZEN SWIFT 9
9 Pin dot matrix, colour, 4 letter quality fonts, 213cps, 8Kb buffer, 2 year warranty, FREE Starter Kit £169.99

STAR LC 20
9 Pin dot matrix, mono, 4 NLQ fonts, 180cps, 8Kb buffer, FREE Starter Kit £129.99

STAR LC 100
9 Pin dot matrix, colour, 4 NLQ fonts, 180cps, FREE Starter Kit £154.99

STAR LC 200
9 Pin dot matrix, colour, 4 NLQ fonts, 225cps, FREE Starter Kit £179.99

STAR LC 24/200
24 Pin dot matrix, colour, 5 letter quality fonts, 222 cps, FREE Starter Kit £259.99

EPSON LX400
9 Pin dot matrix, mono, 3 high quality fonts, 3K buffer, 180 cps, FREE Starter Kit £134.99

EPSON LQ100
24 Pin dot matrix, mono, 7 letter quality fonts, 2 scalable fonts, 200 cps, 11K buffer, 50 page auto sheet feeder, FREE Starter Kit £224.99

INKJET PRINTERS

Citizen Pro Jet	£369.99
Canon BJ10EX	£214.99
Commodore MPS1270	£99.99
Epson Stylus 800	£POA

INKJET CARTRIDGES

Canon BJ10/20	£17.99
Citizen ProJet	£16.99
Commodore MPS1270	£14.99
Epson Stylus 800	£10.00

REFILL INKJET CARTRIDGES - TWIN PACKS

Canon BJ10/20	£17.99
Canon BJ300/330	£18.99
Hewlett Packard/ProJet	£16.99

COMMODORE ATARI CITIZEN STAR AMSTRAD CUMANA PHILIPS GOLDEN IMAGE NAKSHA ABACUS SEGA DIGITA

COMMODORE ATARI CITIZEN STAR AMSTRAD CUMANA PHILIPS GOLDEN IMAGE NAKSHA ABACUS SEGA DIGITA

GOLDEN IMAGE NAKSHA ABACUS SEGA DIGITA PANASONIC JVC MITSUBISHI EPSON CANON TOSHIBA HEWLETT PACKARD GOLDSTAR ZYDEC

12.00 Midnight

AMIGA BOOK SPECIALS

68000 Assembly Language Prog	£21.95
Amiga 3D Graphics Programming in BASIC	£16.95
Amiga Applications	£16.95
Amiga Assembly Language Program	£12.95
Amiga Basic A Dabhand Guide	£15.95
Amiga Basic Inside and Out	£18.95
Amiga C For Beginners	£17.95
Amiga Companion	£16.95
Amiga Desktop Video Power*	£24.95
Amiga Desktop Video Guide	£16.95
Amiga Desktop Video Workbook*	£29.95
Amiga Desktop Video Vol 2	£18.95
Amiga DOS A Dabhand Guide	£14.95
Amiga DOS Inside & Out Revised Edition with disk*	£23.95
Amiga DOS Manual - 3rd Edition	£18.95
Amiga DOS Reference Guide - 3rd Edition	£17.95
Amiga DOS Quick Reference	£8.95
Amiga DOS 2 Companion	£22.95
Amiga For Beginners	£12.95
Amiga Intern	£32.95
Amiga Graphics Inside & Out	£29.95
Amiga Game Makers Manual	£16.95
Amiga Hardware Reference Manual 3rd Edition	£25.95
Amiga Machine Language	£14.95
Amiga Printers Inside & Out	£29.95
Amiga Programmers Guide	£16.95
Amiga Programmers Handbook Vol 2	£22.95
Amiga ROM Kernel Ref Manual 3rd Edition Includes and Autodocs	£34.95
Amiga ROM Kernel Ref Manual 3rd Edition Devices	£32.95
Amiga ROM Kernel Ref Manual 3rd Edition Libs	£31.95
Becoming an Amiga Artist	£16.95
The Best Amiga Tricks & Tips*	£24.95
C: A Dabhand Guide	£14.95
The Commercial Games Prog Guide	£11.95
Computer Viruses & Data Protect	£16.95
Desktop Video Production	£13.95
Elementary Amiga BASIC	£14.95
First Book of the Amiga	£16.95
Get The Most Out of Your Amiga Vol 2	£9.95
Get The Most Out of Your Amiga Vol 2*	£13.95
GFA Basic Interpreter with Disk	£19.99
Inside The Amiga with C	£19.95
Inside Amiga Graphics	£16.95
The Insider Guide to A600	£14.95
Kids and The Amiga - 2nd Edition	£14.95
Learning to Fly with Flight Sim	£12.95
Making Music on the Amiga*	£29.95
Mapping the Amiga	£19.95
Mastering Amiga Amos	£19.95
Mastering Amiga Assembler	£24.95
Mastering Amiga Beginners	£19.95
Mastering Amiga DOS 2 - Vol 1	£21.95
Mastering Amiga DOS 2 - Vol 2	£17.95
Mastering Amiga Printers	£19.95
Mastering Amiga System	£29.95
Mastering Amiga Workbench 2	£19.95
MC68000 Programmers Reference Man.	£8.95
More Amiga Tricks and Tips	£18.45
Programming the 68000	£22.95
Screen Play 2	£9.95
Second Book of the Amiga	£16.95
Using Deluxe Paint - Second Edition	£18.95
Using AREXX on the Amiga Plus*	£29.95

* With FREE disk

You are welcome to visit our NEW 4000sq ft Super Store in Kettering, or visit our extensively stocked Stamford Shop.

MIRACLE PIANO TEACHING SYSTEM

Professional Midi Compatible 49 key keyboard with unique Piano Teaching System. Record, Overlay and mix your own creations with the Miracle's 8 Track Studio. With 250 lesson software, cables, earphones, footpedal and manuals.
PLAY THE PIANO IN 3 WEEKS
Complete System £289.00

SERIOUS SOFTWARE

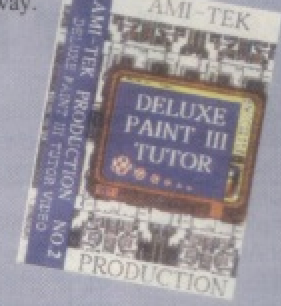
Adorage	£59.99
Amos	£32.49
Amos 3D	£21.49
Amos Compiler	£19.49
Amos Professional	£55.99
Cinemorph	£84.99
Clarity 16 (Microdeal)	£103.99
Deluxe Paint IV AGA	£75.99
DevPac 3	£63.99
Easy AMOS	£25.99
GB Route Plus	£35.99
Gold Disk OFFICE v2	£44.99
HiSoft Pascal	£84.99
Home Accounts	£19.99
Home Accounts 2	£36.99
Junior Typist	£12.99
Final Copy II	£65.99
Megamix Master	£27.99
NEW Mini Office Wordprocessor, 50,000 Word Spell Checker, Database, Spreadsheet, Disk Manager & Graphics Special Offer	£47.99
Morph Plus	£79.99
Music X 1.1	£29.99
Page Setter 3	£49.99
Pen Pal	£39.99
Personal Paint	£49.99
Personal Wright	£29.99
Quarterback	£46.99
Quarterback Tools	£59.99
Scala (Needs 1.5Mb Ram & Hard Drive)	£159.99
Scala 500	£89.99
Take 2	£37.99
Techno Sound Turbo	£29.99
VidiAmiga 12	£75.99
Video Master (Microdeal)	£49.99
Wordworth version 2.0 from Digita	£74.99
X-Backup Pro	£35.99

EDUCATIONAL SOFTWARE

Fun School 2 - Under 6s	£7.99
Fun School 2 - 6 to 8s	£7.99
Fun School 2 - Over 8s	£7.99
Fun School 2 - 8 and Over	£12.45
Fun School 3 - Under 5	£15.45
Fun School 3 - 5-7 Years	£15.45
Fun School 3 - 7 and Over	£15.45
Fun School 4 - Under 5	£15.95
Fun School 4 - 5-7 Years	£15.95
Fun School 4 - 7 and Over	£15.95
ADI Maths 11/12	£16.99
ADI Maths 12/13	£16.99
ADI Maths 12/14	£16.99
ADI English 11/12	£16.99
ADI English 12/13	£16.99
ADI English 12/14	£16.99
ADI French 11/12	£16.99
ADI French 12/13	£16.99
ADI French 12/14	£16.99
ADI Junior Reading 4/5	£16.99
ADI Junior Reading 6/7	£16.99
ADI Junior Counting 4/5	£16.99
ADI Junior Counting 6/7	£16.99
Paint 'N' Create 5 years+	£16.99
Merlin's Maths 7 - 11 years	£16.99
Spelling Fair 7 - 13 years	£16.99
KOSMOS	
Answer Back Junior	£14.45
Answer Back Senior	£14.45
Fact File 500 - 20th Cent. History	£7.95
Fact File 500 - General Science	£7.95
Fact File 500 - Know England	£7.95
Fact File 500 - English Word	£7.95
Fact File 500 - Natural History	£7.95
Fact File 500 - World Geography	£7.95
Fact File 500 - First Aid	£7.95
Fact File - Spelling	£7.95
Fact File - Sport	£7.95
Fact File - Arithmetic	£7.95
Fact File - Association Football	£7.95
The French Mistress	£14.45
The Italian Tutor	£14.45
The German Master	£14.45
The Spanish Tutor	£14.45
Maths Adventure	£19.99
L.C.L	
Micro English (GCSE)	£18.95
Micro French (GCSE)	£18.95
Micro Maths (GCSE)	£18.95
Micro German (GCSE)	£18.95
Mega Maths (A Level)	£18.95
Primary Maths (3-12)	£18.95
Reading and Writing (3-8)	£17.95
Micro Science GCSE	£18.95
MISC	
Junior Typist	£12.99
Better Maths	£16.99
Noddy's Playtime	£19.99

NEW DELUXE PAINT III TUTOR VIDEO

Learn to get the best from NEW Deluxe Paint III. This video shows you how to design and execute your own Animations, Titles and so much more in a Step-By-Step, Easy-To-Follow way.



Subjects covered include:

- ★ Screen Painting
- ★ Zoom
- ★ Colours
- ★ Working with Text and Fonts
- ★ Stencils
- ★ Perspective
- ★ Animation
- ★ Video Titling etc, etc

RUNNING TIME: NEARLY THREE HOURS!!

Superb Value At ONLY £18.99 inc Post & Packing

"I was a little sceptical about the chances of taking a complete beginner to such artistic heights but I must admit to being wrong"
AMIGA COMPUTING, September 1991

ACCESSORIES

Mouse Mat - top quality	£2.99
Mouse Bracket - mouse storer	£1.99
Mouse Mat & Mouse Bracket - gift pack	£4.99
3 Metre Joystick or mouse extension lead	£5.99
Twin Joystick/mouse 6" extension lead	£5.99
Joystick & Mouse "Y" lead - plug both your joystick and mouse in the mouse port	£5.99
Joystick & Mouse auto sensing switch box by Robo	£16.99
Aerial Switch Box - plugs on to TV aerial socket. Allows you to switch the TV input from aerial to computer	£3.99
Modulator Extension Lead - Stops your modulator falling out! 12" lead plugs between Amiga & modulator allowing modulator to sit along the back of Amiga	£10.99
3 Metre Amiga to Stereo Lead	£4.99
5 Metre Amiga to Stereo Lead	£5.99
3.5" disk drive head cleaning kit	£1.99
Naksha mouse with FREE mouse mat, bracket and Operation Stealth Game	£25.99
Tecno Plus Mouse - 300 DPI, Microswitched	£17.99
Happy Mouse with FREE mouse mat	£17.99
Alfa Data Track Ball	£29.99
Voltmace Delta 3A Analogue Joystick	£12.99
Speed King Hand Held Analogue Joystick	£14.99
Analogue Adapter - allows use of IBM-PC Analogue Joystick on an Amiga	£5.99
Sigma Ray Pistol Grip/Microswitched /Auto Fire	£13.49
Zip Stick Autofire Joystick	£12.66
PYTHON 1M Joystick	£9.49
Quickjoy Foot Pedal	£24.95
Desk Top Copy Holder - Makes inputing of data easier supporting paper next to monitor	£9.99
Tilt and Swivel Monitor Stand	£10.99
Monitor Arm - Moving arm clamps to edge of desk supporting monitor above the desk, creating valuable space	£34.99
Printer Stand - 2 piece fits any printer	£7.99
Power Scanner with V3 software	£109.99
Surge Protection Plus	£11.99
GVP DSS8 - Digital Sound Studio, Sound Sampler	£39.99
Midi Connector - with leads	£29.99



AUDITION COMPUTERS LIMITED

DEPT , 3 STATION ROAD, KETTERING, NORTHANTS NN15 7HH. SHOP HOURS (0536) 414892
OUT OF HOURS (0780) 720531

VISA · Switch · Access

TELEPHONE DIRECT TO OUR MAIL ORDER HOTLINE. ALL MAJOR CREDIT CARDS ACCEPTED. QUOTE YOUR NUMBER AND EXPIRY DATE. SAME DAY DESPATCH.

SEND ALL FORMS OF PAYMENT MADE PAYABLE TO AUDITION COMPUTERS LTD. WITH YOUR ORDER PLEASE SEND YOUR NAME, ADDRESS AND DAYTIME TELEPHONE NUMBER ALONG WITH YOUR DETAILED ORDER REQUIREMENTS.

ORDERS UNDER £20.00 PLEASE INCLUDE £1.50 FOR DELIVERY. FREE STANDARD DELIVERY ON ALL ORDERS OVER £20.00 . FOR NEXT DAY DELIVERY ONANY ORDER ADD £4.95. EXPORT ORDERS WELCOME, SUBJECT TO ADDITIONAL CARRIAGE CHARGE.

ALL OUR PRICES INCLUDE V.A.T.

COMMODORE ATARI CITIZEN STAR AMSTRAD CUMANA PHILIPS GOLDEN IMAGE NAKSHA ABACUS SEGA DIGITA

NEXT MONTH IN CU AMIGA TWO WHITE-HOT DISKS!

DISK 56 ASDG'S THE ART DEPARTMENT

Worth more than £80, we've snapped up the rights to ASDG's powerful graphic manipulation program for next month's disk.

Completely compatible with all types of Amiga, from 1Mb A500s right up to the A4000, *Art Department* can help transform your images into all manner of weird and wonderful works of art thanks to a wealth of special effects options.

The package's 24-bit image processing system has been specifically designed to make it suitable for both the novice and expert Amiga user. Just take a look at some of the package's features:

- Automatic image touch-up
- Professional colour separation
- Six dithering methods
- Convert colour images into grey scale
- Fetch Workbench colours for creating icons
- Scale images quickly and precisely
- Render in 208 video modes
- Load, edit and lock partial or full palettes
- Automatically produce line art
- Colour balance and colour correct
- Convert from diverse input file formats to IFFs
- Produce high-quality colour separations
- Prepare films for four colour silk screen printing
- And much, much more!!

Can you really afford to miss the best graphics package to have appeared on the Amiga since *DPaint*?!!

MAY ISSUE ON SALE 26TH APRIL

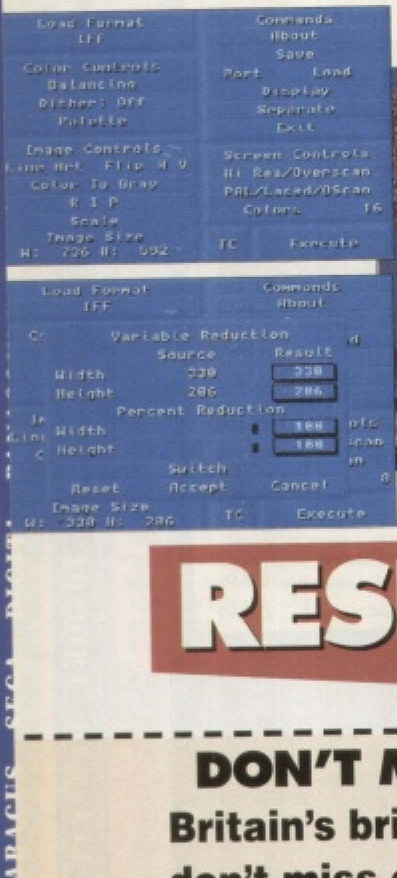
DISK 57 DESERT STRIKE – RETURN TO THE GULF

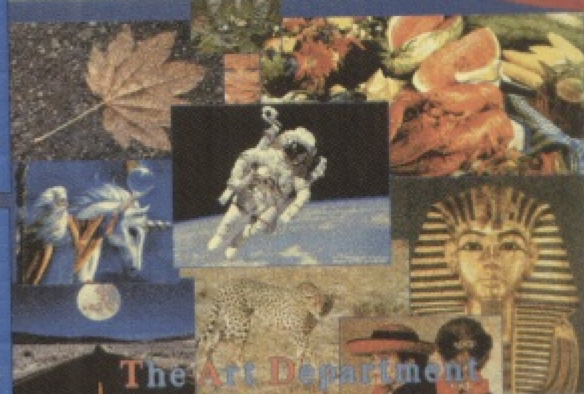
We've flogged the family silver, sold our sisters into slavery and dug deep into our pocket money to bring you what is without a doubt the PLAYABLE DEMO OF THE YEAR. Elsewhere in this very mag you'll see Dan's review of the excellent *Desert Strike* on the Amiga. This drool-worthy shoot 'em up scored a whopping great 93% and was duly awarded a highly prized CU Amiga Superstar into the bargain. And next month you get the chance to play an entire campaign! That's right, those lurverly people at Electronic Arts have put together a huge playable demo that will take hours to complete.

Taking control of an Apache helicopter gunship, you have to guide the flying fortress on a series of missions against the evil General Kilbaba. This involves taking out radar sites, blowing up fighter bases, destroying power stations and knocking out a heavily defended command bunker.

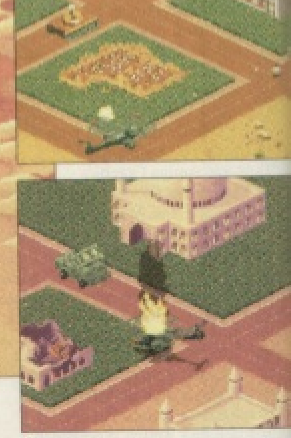
Equipped with state-of-the-art Hydra and Hellfire missiles, it's up to you to save the day and end the evil madman's threat to world peace once and for all. This is one serious shoot 'em up, so whatever you do, DON'T MISS IT!

As with our *OctaMed*, *MovieSetter*, *Sculpt 4D Jnr*, *GB Route* and *Power Packer V3.0* offers, our next issue is sure to be a sell-out, so you've only got yourself to blame if you miss it!









* Contents subject to change without notice.

RESERVE YOUR COPY NOW

DON'T MISS OUT – RESERVE YOUR COPY OF CU AMIGA TODAY!

Britain's brightest and best Amiga magazine only comes out once a month, so don't miss out – put in a standing order with your local newsagent.

Please reserve me a copy of CU Amiga every month, starting with the MAY issue which goes on sale on April 26th.

NAME..

ADDRESS..

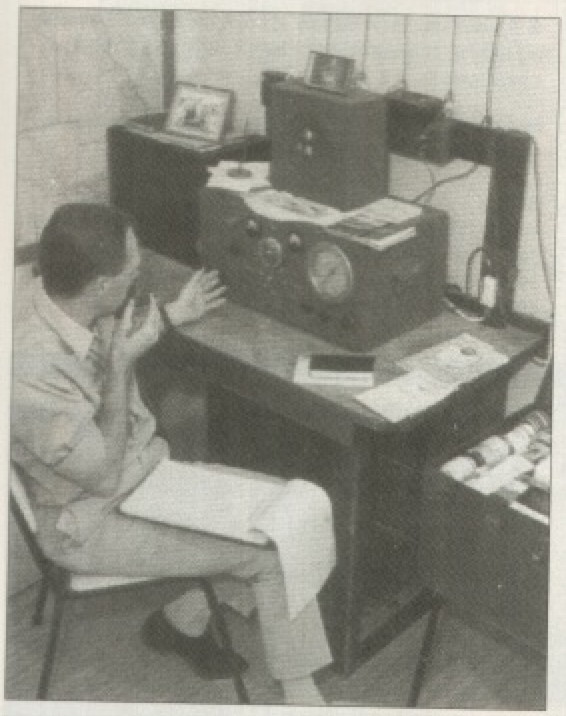
..TEL.....................

ANORAKS & AMIGAS

What has the Amiga got to do with Amateur Radio? Tony Kaye, a licensed Ham, explains...



PROFILES

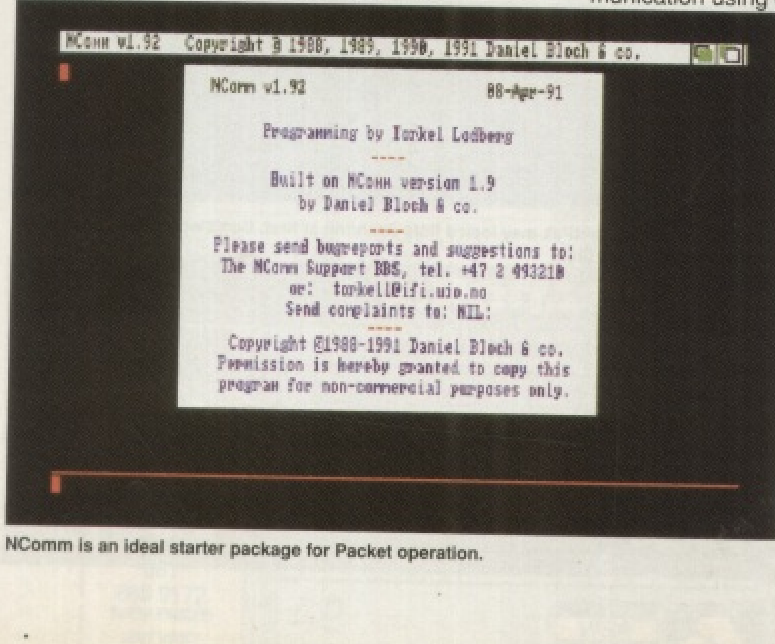




The Tiny-2 TNC (pictured above) is £139.95 from Siskin Electronics including software and leads. The TNC-320 is £199.95.

What's your impression of a Radio Ham? Someone who wears an anorak and stands on a hill with a walkie-talkie in his hand? A Tony Hancock lookalike being conned into thinking he's talking to a round-the-world yachtsman? You couldn't be more wrong. Of course, there are people who do look like outcasts from the National Train Spotter's Union, but they are in the minority now.

Today, there are many different aspects to the hobby including Packet Radio, a system of communication using computers. A network of Nodes and BBSs are in existence for sending personal mail and bulletins around the world, and you can access it with a single channel radio with very little power. The catch? You need to sit an exam and get a licence to use it.



NComm is an ideal starter package for Packet operation.

LICENCE

There are three classes of licence available in the UK: Class A, Class B and Novice. They are identified by their callsign. Rather like a car number plate, a callsign is unique to the operator. Mine, for example, is G4UUZ. The G signifies that I'm licensed in Great Britain, the 4 shows that my licence is a class A and the three letters make up the rest of my individual identification.

To get a licence, you have to take a City and Guilds two-part examination which will give you a Class B operator's licence and follow that with a 12 words-per-minute Morse code test run by British Telecom to get the Class A. The novice licence involves a 30 hour training course covering a practical test and theory of radio operating, taken by RSGB approved instructors. This is followed by a City and Guilds Novice Radio Amateurs Exam. Again, these are split to class A and class B, the difference being a five words per minute test for the class A.

Basically, the only difference between the classes is the range of frequencies available. At one time, it was essential to be able to use Morse, but nowadays, with data communications being so comparatively reliable, even the Navy has stopped insisting on it as a requirement. There are various discussions always in progress about the validity of the Morse Test as a method of dividing the Ham fraternity, so rules can and do change frequently.

Amateurs are licensed for good reason. It's easy to cause interference to televisions and radios, so you must be able to recognise the symptoms and know how to cure them. The basics of electronics are covered, too. Many colleges run evening classes and even Radio Clubs can teach you what you need to know.

PACKET RADIO

Amateur Radio is not limited to just talking to people about how well they're receiving your sig- ➤

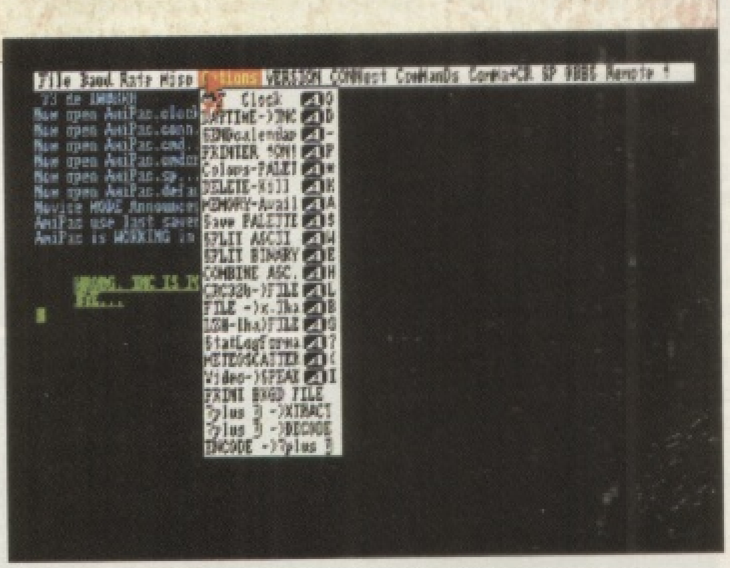


The TNC-220, a good secondhand buy.

nal in Northern Ireland or Finland. Packet Radio works on a system that Bulletin Board users will be familiar with. Your local BBS (Bulletin Board System) is joined to all of the others via radio links. They are provided by other Hams, often free of charge (although donations are always welcome) or funded by clubs and other groups. All you need to do to send a message to someone on the other side of the world is link into this board.

There's a wide range of subjects covered on the Bulletin Boards from technical subjects through political comment to the downright flippant! If you have a specific interest, I can almost guarantee that someone else also shares it and information is soon exchanged. For example, when I first set up my system, I put a request on my local board for PD software. Within a couple of hours, I had three replies and the following day, a parcel of disks arrived! This is unusual, but it can and does happen.

Some of the larger supported areas of conversation include repairs and upgrades to radio equipment and other radio related subjects, but Hams know how to have fun, too. There is an active group of Amiga owners swapping programming tips and even sending PD programs to each other, satellite television watchers, Star Trek fans, comedians, ST, PC and C64 owners and many others, too. Debates on various subjects, some serious and some more light-hearted are nearly always running. All you need to do to join in is send a message.



There are many options in Ami-Pack, a little practice is needed before using this on air.

WHAT DO I NEED?

We've already discussed the need for a licence to operate a Packet Radio station, now let's look at the hardware.

You already own the heart of the system, the Amiga itself. To this, you need to add software, a TNC (Terminal-Node Controller) and a radio transceiver system. The hardware is available from specialist dealers and magazines like Ham Radio Today carry a regular Packet Radio Column as well as advertising from suppliers. Most of the software, like NComm and the excellent AMI-PAK, are PD or shareware, so that won't cost a fortune.

There are several TNCs on the market ranging upwards in price from around £140. A buoyant second-hand market means that you could save on this if you don't mind a unit that's already been used.

Most TNCs also incorporate a PMS (Personal Mailbox), and by sending a message to the SysOp of your local BBS, you can have your personal mail forwarded to you while you're not there.

The radio can be bought second-hand for as little as £50, and an antenna can even be home-made. All that's needed is a one channel transceiver with relatively low power, so there's no need to spend vast amounts on flash equipment. A lot of hams use converted commercial equipment. More information is forthcoming from joining local groups and visiting 'Rallies'. These are gatherings of amateurs that take place at various locations throughout the year and take the form of small exhibitions. Retailers and enthusiasts can be found here and it's also a good source of computer add-ons and consumables.

JARGON BUSTERS

● *TRANSCEIVER* – This is a posh name for two-way radio. Stands for Transmitter-Receiver and covers any radio capable of both. In Ham terms, it's often called a 'rig'.

● *TNC* – Terminal-Node Controller. This is the radio equivalent of a modem (without the bills!). It converts the signals from your Amiga into a form that others can understand and sends packets of data, via the radio, to other TNCs.

● *NODE* – This is a type of repeater system. The node takes your signal and forwards it to the next node or BBS. This increases the range of your equipment so that all your system needs to be capable of is reaching one of these. A node can also be used to access a BBS that is operating on a different frequency.

● *BBS* – Bulletin Board System. The heart of the packet system. This is the software set up for you to communicate with. It stores messages, bulletins and even text files and some programs. Most are run on PC-based computers.

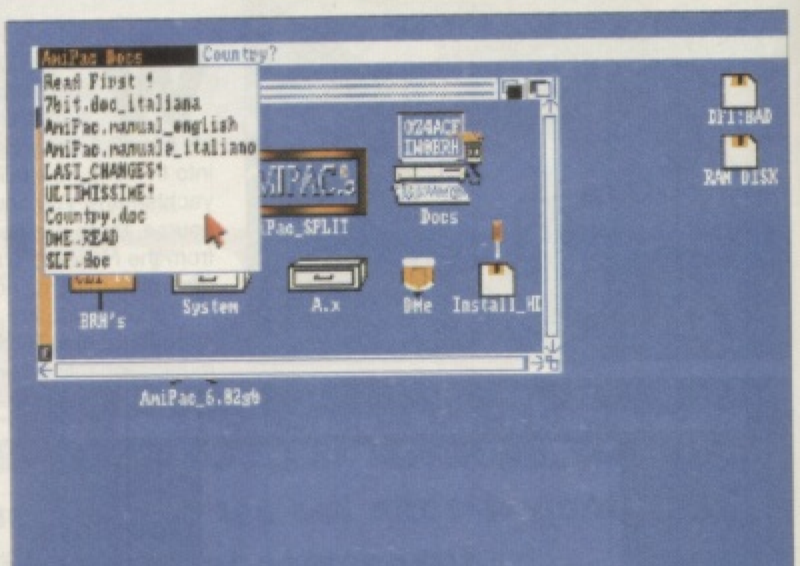
● *TERMINAL PROGRAM* – As the TNC is effectively a modem, any comms package will actually connect you to a BBS. Specific Packet Radio terminal programs are available with much more tailored features including transfer protocols.

● *7 PLUS* – 7+ is a form of program archiving that splits the file into chunks that can be sent over the system. It has also been designed to avoid the control codes that the BBS operates on to reduce the likelihood of clashes between the archived code and the BBS commands.

● *RSGB* – The Radio Society of Great Britain is the governing body of Amateur Radio in the UK, although it is not compulsory to be a member.

● *DTI* – The Department of Trade and Industry are responsible for licencing and policing the airwaves.

● *PMS* – Most TNCs have a Personal Message System built in. This is used to forward your messages to you when you're not there. It saves having to log on to the BBS just to see if there's any mail for you, although you will need to keep up with the bulletins.



The menu system on AmiPak may look a little daunting at first. Don't worry, full documentation is provided on the disk.

FOR FURTHER INFORMATION...

If your appetite has been whetted, then the next step is to find out more about becoming licensed or about where to get the equipment. Here's a list of useful contacts

Siskin Electronics, 2, South Street, Hythe, Southampton, SO4 6EB, tel: 0703 207155. Suppliers of TNCs and software.

Radio Society of Great Britain, Lambda House, Cranborne Road, Potters Bar, Herts, EN6 3JE, tel: 0707 59015. For all information regarding licencing and amateur radio. Also details of Novice licencing.

Eagle Software



FREE MYSTERY GAME WITH ORDERS OVER £50

118a Palmers Road
New Southgate
LONDON N11 1SL

CREDIT CARD HOTLINE: **081 889 9172**
ENQUIRY/ORDER LINE: **081 361 5730**
24 HOUR FAX LINE **081 361 2733**

BITMAP BROTHERS VOL 1 only £16.99
Xenon, Cadaver and Speedball II

CHAMPIONS only £13.99
Jahangir Khan Squash, Man United and W.C. Boxing Manager

BIG BOX only £15.99
Captain Blood, Tin Tin on the Moon, Safari Guns, Teenage Queen, Bubble Plus, Purple Saturn Days, Krypton Egg, Jumping Jackson, BoBo, Hostages

BOARD GENIUS only £17.99
Deluxe Monopoly, Deluxe Scrabble Cluedo Master Detective and Risk

HOLLYWOOD COLLECTION only £18.99
RoboCop, Ghostbusters 2, Indiana Jones, Batman the Movie

MAX EXTRA only £17.99
Turrican II, ST Dragon, SWIV and Night Shift

THE GREATEST only £19.99
Jimmy White's Whirlwind Snooker, Lure of the Temptress, and Dune

STRATEGY MASTER only £21.99
Deuteros, Populous, Hunter, Chessplayer 2150 and Spirits of Excalibur

DIZZYS EXCELLENT ADVENTURES only £16.99
Dizzy Panic, Bubble Dizzy, Dizzy Prince of Yolk Folk, Spellbound Dizzy and Kwik Snak

SPORTS MASTERS only £19.99
PGA Tour Golf, Indy 500, Advantage Tennis, and European Championship 1992

DREAM TEAM only £16.99
Terminator II, Simpsons, W.W.F.

SOCCER MANIA only £11.99
Football Manager II, Gazza's Soccer, Football Manager - W.C. Edition, Microprose Soccer

TEST DRIVE II COLLECTION only £20.99
Muscle Cars, California Challenge European Challenge, Duel, Super Cars

4 WHEEL DRIVE only £19.99
Lotus Esprit, Celica GT4 Rally, Team Suzuki, and Combo Racer

RAINBOW COLLECTION only £13.99
New Zealand Story, Bubble Bobble, Rainbow Islands

NINJA COLLECTION only £13.99
D. Dragon, Shadow Warrior, D. Ninja

AWARD WINNERS ONLY £16.99
Kick Off II, Pipemania, Space Ace and Populous

SUPER FIGHTER only £16.99
Pitfighter, W.W.F., Final Fight

ACTION MASTERS only £11.99
Turbo Outrun, F16 Combat Pilot, Italy 1990, Welltris and Double Dragon II

ACTION PACK only £12.99
Cosmic Pirates, Rotox, Maya, On Safari, Eliminator, Fast Lane, Sherman M4, Hostages, Targlan and Colorado

RAVING MAD only £18.99
Mega twins, Rodland, Robocod

POWER PACK II only £17.99
Predator II, Battle Master, Wings, It Came From The Desert

BIG BOX II only £19.99
Back to the Future III, R-Type, IK+, Real Ghostbusters, Def of the Earth, TV Sports Football, Shanghai, Armalyte, Sinbad, Bomboozal

POWER PACK only £14.99
Xenon 2, TV Sports Football, Bloodwych and Lombard Rally

COMBAT CLASSICS only £20.99
F15 Strike Eagle II, 688 Attack Sub and Team Yankee

BITMAP BROS VOL 2 * only £16.99
Xenon II, Gods, Magic Pockets

2 HOT 2 HANDLE only £18.99
Golden Axe, Total Recall, Shadow Warrior, Super Off Road Racing

MEGA MIX only £19.99
Leander, Agony and Ork

SPORTS COLLECTION only £12.99
Run the Gauntlet, Pro Tennis Tour and World Cup Soccer (Italia '90)

ACTION 5 only £19.99
Rick Dangerous II, Ghostbusters II, Gunship, Super Ski and Hard Driving

TOP TITLES	AMIGA
A500+ 1Meg Upgrade	£39.99
A600 1Meg Upgrade + clock	£49.99
0.5 Meg Upgrade + clock	£25.99
3D Construction Kit II	£36.99
4D Sports Boxing	£11.99
4D Sports Driving	£11.99
A-Train	£23.99
Action Stations	£12.99
Addams Family	£16.99
Agony	£15.99
Air Combat Patrol	£19.99
Air Support	£15.99
Aliens III *	£16.99
A Maclean's Pool	£16.99
Amos (Easy)	£23.99
Amos 3D	£23.99
Amos Compiler	£19.99
Amos Professional	£54.99
Amos The Creator	£36.99
Another World	£17.99
Aquatic Games star J Pond	£16.99
Aquaventura	£13.99
Arabian Nights	£16.99
Armourgeddon	£15.99
Armourgeddon Upgrade *	£10.99
Armourgeddon II *	£19.99
Ashes of Empire	£20.99
Assassin	£16.99
A.T.A.C. *	£23.99
B17 Flying Fortress *	£23.99
Bane of the Cosmic Forge	£24.99
BARBARIAN II (Psyg)	£14.99
Bards Tale Trilogy *	£19.99
Bart vs the World *	£16.99
B.A.T. II	£22.99
Battle Chess II	£16.99
Battle Isle	£16.99
Battle Isle Data Disc	£13.99
Battle Toads	£16.99
BC Kid	£16.99
Big Run	£12.99
Birds of Prey	£23.99
Black Crypt	£16.99
Blue Max	£11.99
Body Blows	£16.99
Buck Rogers	£19.99
Buck Rogers II	£20.99
Cadaver	£11.99
Cadaver - the pay off	£10.99
Caesar	£16.99
Campaign	£22.99
Captive	£15.99
Captive II	£17.99
Carl Lewis Challenge	£15.99
Castles	£16.99
Castles Data Disc	£11.99
Castle of Dr Brain	£15.99
Chaos Engine	£16.99
Chase HQ II	£14.99
Chuck Rock II *	£16.99
Civilisation	£23.99
C.Y's Air Combat	£20.99
Cool Croc Twins	£16.99
Cool World	£16.99
Combat Air Patrol	£18.99
Conflict Korea	£23.99
Contraptions *	£16.99
Cover Girl Poker	£16.99
Covert Action	£23.99
Crazy Cars III	£16.99
Cruise for a Corpse	£17.99
Crystal Kingdom Dizzy	£13.99
Curse of the Enchanter	£23.99
Cytron	£19.99
Dalek Attack	£12.99
Darkmere	£16.99

TOP TITLES	AMIGA
Das Boot	£11.99
Deliverance	£15.99
Desert Strike	£16.99
D/Generation	£11.99
Doodlebug	£16.99
Double Dragon III	£16.99
Dreadnoughts	£22.99
Dune	£19.99
Dune II *	£19.99
Dungeon / Chaos	£19.99
Dyna Blast	£20.99
Elf	£15.99
Elvira II - Cerberus	£23.99
Epic	£19.99
Eye of the Beholder	£19.99
Eye of the Beholder II	£23.99
F14 Tom Cat *	£18.99
F15 Strike Eagle II	£23.99
F117A Stealth Fighter *	£21.99
F19 Stealth Fighter	£19.99
F29 Retaliator	£15.99
Face Off - Ice Hockey	£15.99
Falcon	£11.99
Falcon Mission Disk I	£8.99
Falcon Mission Disk II	£8.99
Falcon 3.0	£23.99
Fantastic Voyage	£16.99
Fate of Atlantis (Adv)	£25.99
Fate of Atlantis (Arc)	£16.99
Final Blow	£16.99
Final Fight	£16.99
Fire and Ice	£15.99
First Samurai/MegaLoMan	£20.99
FireStone HD Scenery	£13.99
Flashback *	£16.99
Flight of the Intruder	£11.99
Football Crazy	£14.99
Football Manager III	£14.99
Free DC	£18.99
Gauntlet III	£12.99
Global Effect	£16.99
Goblins II	£19.99
Gods	£16.99
Golden Shot	£16.99
G. Gooch Cricket	£21.99
Graham Taylor	£15.99
Grand Prix (Formula)	£23.99
Gunship 2000	£23.99
Guy Spy	£20.99
Harlequin	£16.99
Harpoon (1 Meg)	£19.99
Harrier Assault AV8B	£23.99
Heimdall	£18.99
Hero's Quest II	£16.99
Hill Street Blues	£15.99
Historyline 1914-18	£21.99
Home Alone	£23.99
Home Alone Colouring Book	£14.99
Hook	£15.99
Humans	£19.99
I. Bothams Cricket	£19.99
International Sports Chall.	£15.99
Ishar - Legend Fortress	£20.99
Jaguar XJ220	£16.99
James Pond III (Op Starfish)	£16.99
Jim Power *	£16.99
J. White's Whirlwind	£16.99
J. Barnes (1 Meg)	£15.99
J. Madden's Football	£16.99
KGB	£20.99
Kick Off II (1 Meg)	£15.99
Kick Off II (.5 Meg)	£14.99
Kick Off III*	£16.99
Kid Gloves II	£16.99
Kings Quest V	£15.99
Knight Mare + Hint Book	£19.99

TOP TITLES	AMIGA
Knight of the Sky	£23.99
Lawn Mower Man *	£16.99
Leander	£15.99
Leathal Weapon	£16.99
Leeds Utd	£12.99
Legend + Hint Book	£19.99
Legend of Kyrandia	£20.99
Legends of Valour	£23.99
Leisure Suit Larry II	£14.99
Leisure Suit Larry III	£19.99
Leisure Suit Larry V	£26.99
Lemmings	£15.99
Lemmings and Data Disk	£19.99
Lemmings II	£21.99
Lemmings - Data Disk	£13.99
Lemmings - Stand Alone	£15.99
Links HD	£23.99
Liquid Kids *	£16.99
Lost Treasures of Infocom *	£29.99
Lotus Turbo Challenge II	£16.99
Lotus Turbo Challenge III	£16.99
Lure of the Temptress	£19.99
M1 Tank Platoon	£16.99
MacDonald Land	£17.99
Magic Pockets	£15.99
Man Utd. Europe	£15.99
M. Ditka Ultimate Football *	£18.99
Mega Fortress	£16.99
Mega Sports	£16.99
Megatraveller II	£20.99
Microprose Golf	£23.99
Midwinter II	£23.99
Mig 29 Fulcrum	£16.99
Might of Magic III	£23.99
Moonstone	£19.99
Monkey Island	£15.99
Monkey Island II	£25.99
Mouse (Switchable)	**£9.99**
Myth	£18.99
Nick Faldo Golf	£23.99
N. Mansell World Champ	£20.99
ORBITUS	£12.99
Ork	£15.99
Outlanders *	£16.99
Pacific Islands - T.Yankee II	£20.99
Pacific Islands II *	£21.99
Parasol Stars	£15.99
Perfect General	£20.99
PGA Golf Tour +	£20.99
PGA Courses Disk	£10.99
Pinball Dreams	£15.99
Pinball Dreams II	£16.99
Populous II - The Challenge	£11.99
Populous II + (1 Meg)	£23.99
Power and Glory *	£19.99
Power Up Compilation	**£12.99**
Premiere	£20.99
Premier Manager	£16.99
Project X	£16.99
Push Over	£15.99
Putty	£16.99
QUEST AND GLORY	£16.99
Ragnorak	£23.99
Railroad Tycoon	£23.99
Reach for the Skies	£20.99
Red Baron	£15.99
Red Zone	£15.99
Risky Woods	£16.99
Road Rash	£16.99
Robin Hood	£16.99
Robocod	£15.99
Robocop III	£16.99
Robo Sports	£20.99
Rod Land	£16.99
Rookies *	£17.99
R-Type II	£14.99

TOP TITLES	AMIGA
Sabre Team	£16.99
Savage Empire	£22.99
Secret Silver Blues	£21.99
Secret Weap Luft *	£19.99
Sensible Soccer 92-93	£16.99
Shadowlands	£20.99
SHADOW BEAST II	£16.99
Shadow of the Beast III	£19.99
Shadow Worlds	£16.99
Shuttle the Sim	£20.99
Silent Service II	£23.99
Sim Ant	£22.99
Sim Earth	£23.99
Simpsons	£15.99
Sleepwalker 500/12000	£20.99
Snow Bros	£16.99
Soccer Kid	£16.99
Soup Trek *	£16.99
Space 1889	£16.99
Space Ace II	£33.99
Space Gun	£12.99
Space Crusade + Upgrade	£16.99
Space Quest I,II,III,or IV	£23.99
Special Forces	£23.99
Steel Empire	£20.99
Stereo Master	£26.99
Storm Master	£16.99
Street Fighter II	£17.99
Strike Fleet	£16.99
Striker	£16.99
Super Cauldron *	£16.99
Super SWIV *	£16.99
Supremacy	£18.99
Sword of Honour	£16.99
Tear Away Thomas	£15.99
Tennis Cup 2	£16.99
Test Drive III *	£15.99

TOP TITLES	AMIGA
The Games '92 Espana	£20.99
Their Finest Hour	£19.99
The Manager	£20.99
ThunderhawkAH-73M	£21.99
Thunder Jaws	£16.99
Tip Off	£16.99
Toki	£15.99
Toon World *	£16.99
Troddlers	£16.99
Trolls	£16.99
TV Sports Baseball	£11.99
TV Sports Boxing	£11.99
Turtles II	£11.99
Twilight 2000	£23.99
Ugh!	£15.99
Ultima Martian Dreams *	£20.99
Ultima V	£19.99
Ultima VI	£20.99
UMS II	£16.99
UMS II Planet Editor *	£20.99
Universal Masters	£16.99
Uridium II *	£17.99
Utopia	£16.99
Utopia New World	£11.99
Video Kid	£15.99
Viking Fields of Conquest	£15.99
Voyage Beyond	£16.99
Vroom	£16.99
Walker *	£18.99
Waxworks	£21.99
White Death (1 Meg)	£12.99
Willy Beamish	£15.99
Wing Commander I	£19.99
Wiz Kid	£15.99
W.W.F.	£15.99
W.W.F. II	£15.99
Zool	£16.99

EDUCATIONAL

ADI English 11-12	£16.99
ADI English 12-13	£16.99
ADI English 13-14	£16.99
ADI French11-12	£16.99
ADI French 12-13	£16.99
ADI French 13-14	£16.99
ADI Maths11-12	£16.99
ADI Maths 12-13	£16.99
ADI Maths 13-14	£16.99
Better Spelling 8-14	£14.99
Better Maths 12-16	£14.99
Fun School 2 under 6	£6.99
Fun School 2 6-8	£6.99
Fun School 2 over 8	£6.99
Fun School 3 under 5	£16.99
Fun School 3 5-7	£16.99
Fun School 3 7+	£16.99
Fun School 4 under 5	£16.99
Fun School 4 5-7	£16.99
Fun School 4 7+	£16.99
Junior Typist	£11.99
Magic Maths (4-8)	£14.99
Maths Mania	£14.99
Noddy's Playtime	£16.99
The Three Bears	£14.99

3.5 DS DD discs

with Labels boxed in 10's

10 x 3.5	DS	DD	£5.99
20 x 3.5	DS	DD	£11.99
30 x 3.5	DS	DD	£15.99
50 x 3.5	DS	DD	£21.99
100 x 3.5	DS	DD	£39.99

Please add 50p per 10 discs when ordering to cover P & P

AMIGA BUDGET TITLES UNDER £10

3D Pool	£6.99	Hudson Hawk	£6.99
Adrenalynn	£6.99	Hunter Killer	£2.99
Afterburner	£6.99	IK+	£6.99
Altered Beast	£6.99	Impossible Mission II	£6.99
Arkanoid II	£6.99	Indy Last Crusade Graphic	£9.99
ATOMINO	£8.99	James Pond	£6.99
Barbarian	£5.99	Jet Set Willy	£7.99
Barbarian II	£6.99	J.Khan Squash	£6.99
Batman The Movie	£6.99	Kid Gloves	£5.99
Battlehawks 1942	£9.99	Last Ninja II	£6.99
Blood Money	£6.99	Last Ninja III	£7.99
Cabal	£6.99	Lombard RAC Rally	£6.99
California Games	£6.99	Lotus Esprit	£6.99
Carrier Command	£9.99	Manic Miner	£7.99
Celica GT4 Rally	£6.99	M. Jackson Moonwalker	£6.99
Centrefold Squares	£6.99	Midnight Resistance	£6.99
Chase HQ	£6.99	Midwinter	£9.99
Cloud Kingdom	£6.99	Moonshine Racers	£6.99
Colossus Chess	£6.99	Murder	£7.99
Combo Racer	£6.99	Narc	£6.99
Conflict in Europe	£7.99	Navy Seals	£9.99
Continental Circus	£5.99	New Zealand Story	£6.99
Deluxe Strip Poker	£6.99	Ninja Remix	£7.99
Double Dragon I or II	£6.99	North & South	£6.99
Dragon Ninja	£6.99	Out Run	£6.99
Duel	£6.99	Operation Stealth	£9.99
Fantasy World Dizzy	£5.99	Operation Thunderbolt	£6.99
F16 Combat Pilot	£7.99	Operation Wolf	£6.99
Final Countdown	£6.99	Outrun Europe	£7.99
F.O.F.T.	£6.99	Pang	£6.99
Gauntlet II	£6.99	Panza Kick boxing	£8.99
Gem X	£6.99	Pinball Magic	£7.99
Ghostbusters II	£6.99	Pitfighter	£6.99
Ghouls'n'Ghosts	£6.99	Platoon	£5.99
Golden Axe	£6.99	Plotting	£6.99
Head over Heels	£6.99	P.P.Hammer	£6.99

Predator	£6.99
Prince of Persia	£6.99
Pro Tennis Tour	£6.99
Puzznic	£6.99
Rainbow Islands	£6.99
Rambo III	£6.99
RBI2 Baseball	£6.99
Resolution 101	£6.99
Rick Dangerous II	£7.99
Robocop	£6.99
Robocop II	£6.99
R-Type	£6.99
Run The Gauntlet	£6.99
R.V.F. Honda	£6.99
Shadow of the Beast	£6.99
Shadow Warrior	£6.99
Sherman M4	£6.99
Shinobi	£6.99
Smash TV	£6.99
Stargilder II	£6.99
Stunt Car Racer	£6.99
Supaplex	£5.99
Super Cars II	£8.99
Super Off Road	£8.99
Super Hang On	£6.99
SwitchBlade	£6.99
Switch Blade II	£8.99
Swiv	£6.99
Terminator II	£6.99
Thunderstrike	£6.99
Toobin'	£6.99
Turrican II	£7.99
Untouchables	£6.99
Vigilante	£6.99
WC Leaderboard	£6.99
World Championship Boxing	£6.99
Zak McKracken	£8.99
Xenon II	£7.99

VISIT OUR SHOP AT 120a MYDDLETON ROAD
WOOD GREEN
LONDON
N22 4NQ
081 889 9172
SHOP PRICES MAY VARY.

Please make cheques and P.O.'s payable to *Eagle Software*. P&P is £1.00 per item in the UK. Orders under £10 please add 50p per item. Europe: add £3.50 per item. Elsewhere add £4.50 per item. New titles will be sent as released and are subject to manufacturers price reviews. E.&O.E.
SPECIAL OFFER APPLIES ONLY IF QUOTED WHEN ORDERING.

Computer ________ **AMIGA** ________ Date ________
Title ________________ Price ________
________________ Price ________
________________ Price ________
________________ Price ________
P & P ________
Total ________

VISA Access

Name: ________________
Address: ________________
____
____
Postcode: ________ Tel: ________
Card No: ________________
Exp Date ________ Member No: ________
Access ☐ Visa ☐ Cheque ☐ P.O's ☐

Free Membership with First Order. No obligation to re-order.

*Not released at time of going to press

Evesham Micros ● CALL US NOW ON (0386) 765500 ● Evesham Micros ● CALL US NOW ON (0386) 765500 ●

Evesham Micros



PRICES INC.DELIVERY & VAT @ 17.5%

HERE TODAY ~ HERE TO STAY

Evesham Micros First. First for choice, prices and service. Established for over nine years, with a strong financial status and secure future. Our Computerised Telesales Order Processing investment means fast, efficient service. Well appointed Retail Showrooms with large product range on display. Our huge Customer database, high percentage of repeat custom and personal referrals underlines our popularity. *REMEMBER* - when you need us, we will still be here. Our extensive expansion program means we could eventually be there as well ...

HOW TO ORDER....

Call us now on
0386 765500

TELESALES OPENING TIMES:
9am – 7pm Monday-Friday
9am – 5.30pm Saturday

Send Cheque, Postal Order or Access/Visa/Switch/AmEx card details to:

Evesham Micros Ltd., Unit 9, St Richards Road, Evesham, Worcs. WR11 6TD

Mail Order Fax: 0386-765354

Government, Education & PLC orders welcome • Same day despatch whenever possible • Express Courier delivery (UK Mainland only) £6.50 extra • Please note that 5 banking days must be allowed for cheque clearance. Immediate clearance on Bank Drafts • Credit card orders: We do not charge the card until the goods are despatched.

Switch / Access / Visa / AmEx Cards Welcome

RETAIL SHOWROOMS

Normal Opening times: Monday-Saturday, 9.00-5.30
Late Night Opening Until 7pm Wednesday-Friday

EVESHAM	BIRMINGHAM
Unit 9 St Richards Rd, Evesham, Worcs WR11 6TD ☎ 0386•765180 fax : 0386 765354	251-255 Moseley Rd, Highgate, Birmingham B12 0EA ☎ 021•446 5050 fax : 021 446 5010
CAMBRIDGE	**MILTON KEYNES**
5 Glisson Road, Cambridge CB1 2HA ☎ 0223•323898 fax : 0223 322883	320 Witan Gate, Milton Keynes MK9 2HP ☎ 0908•230898 fax : 0908 230865

TECHNICAL SUPPORT ☎ 0386-40303
Monday to Friday, 10.00 - 5.00

1 YEAR WARRANTY ON ALL GOODS

Details correct at time of going to press • All goods subject to availability

AMIGA SOFTWARE

Digita Wordworth	£ 99.00	MR Backup	£ 29.95
Kind Words 3	£ 49.95	AMOS	£ 37.50
Protext V5.5	£ 120.00	HiSoft Lattice C	£ 199.00
Home Accounts V2	£ 49.00	GFA BASIC Compiler	£ 24.95
Deluxe Paint 4	£ 79.99	Devpac 2.15	£ 44.95
Deluxe Video 3	£ 84.95	Workbench Management	£ 9.95

AMIGA 500 SOLDERLESS RAM UPGRADES

A500 512K RAM/CLOCK UPGRADE

ONLY £19.99 INC. VAT AND DELIVERY

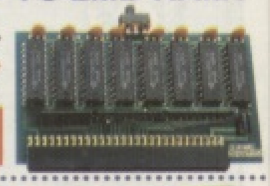
ALSO WITHOUT CLOCK FOR ONLY : £16.99

☆ CONVENIENT ON / OFF MEMORY SWITCH ☆ AUTO-RECHARGING BATTERY BACKED REAL-TIME CLOCK ☆ COMPACT, ULTRA-NEAT DESIGN

'A500 PLUS' 1MB RAM UPGRADE

THE *FASTEST* AND EASIEST WAY TO UPGRADE YOUR A500+ TO 2MB RAM!

Simply Plugs into trapdoor expansion area ☆ Increases total RAM capacity to 2Mb 'ChipRAM' ☆ RAM On/Off Switch ☆ Compact unit size ☆ Only 8 low power RAM IC's ☆ High reliability



ONLY £37.95

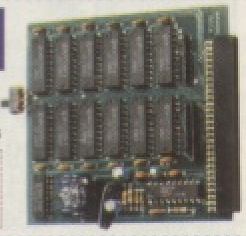
1.5MB RAM BOARD

UPGRADE TO 2MB FOR ONLY £62.99!

Fully populated board increases total RAM in A500 to 2Mb! ☆ Plugs into trapdoor area, & connects to 'GARY' chip ☆ Includes Battery-Backed Real-Time Clock ☆ Socketed RAM ICs on 512K / 1Mb Versions

Unpopulated RAM board with clock .... £ 34.95
With 1.5Mb FASTRAM installed..... £ 62.99

N.B.: The expansion board requires Kickstart 1.3 to operate - Kickstart 1.3 upgrade available from us for £29.95



'MEGABOARD'



With our MEGABOARD, you can further expand your A500's memory to *a total of 2MB* without disposing of your existing 512K upgrade (must be 4 x RAM-chip type, or not exceeding 9cm in length).

CONNECTS TO YOUR 512K RAM UPGRADE TO GIVE 1.5MB

ONLY £42.99

MEGABOARD needs Kickstart 1.3 to operate (Kickstart 1.3 upgrade available from us for £29.95). Installation requires connection to the GARY chip. Easy to follow instructions provided.

A500 EXTERNAL RAM UNIT

- ☆ Throughport for further expansion
- ☆ Very low power consumption
- ☆ Style matched to the A500
- ☆ RAM access LED
- ☆ RAM test/run switch
- ☆ Available fitted with 2Mb, 4Mb, or fully populated with 8Mb
- ☆ Optional PSU (allows Amiga to power other devices)



Incorporating the latest 'ZIP' DRAM technology, our new External Memory Upgrade allows the A500 / A500+ to be upgraded by up to a further 8Mb of auto-configuring FASTRAM.

N.B. Any memory fitted to this unit is in addition to that on your machine already, to a maximum of 8Mb on the external unit.

With 2MB fitted...£112.99 with 4MB...£159.99 with 8MB...£259.99

PARTIALLY POPULATED UNITS EXPAND TO 8MB WITH 2MB MODULES, AVAILABLE SEPARATELY AT ONLY £89.99 PER 2MB • OPTIONAL POWER SUPPLY £14.95

3½" EXTERNAL FLOPPY DRIVES

AMAZING LOW PRICE !
£47.99
including VAT & delivery



- Very quiet
- Slimline design
- Suits any Amiga
- Cooling vents
- Sleek, high quality metal casing

- Quality Citizen/Sony drive mechanism
- Enable / Disable switch
- Full 880K Formatted Capacity
- Long reach connection cable
- Throughport facility for addition of further drives

REPLACEMENT A500 INTERNAL 3.5" DRIVE KIT



Fully compatible, with 1Mb unformatted capacity. Straightforward installation procedure. Kit includes full fitting instructions.

ONLY £39.99

NEW LATE NIGHT SHOWROOM OPENING UNTIL 7PM, WEDNESDAY TO FRIDAY ● Evesham Micros

PRINTERS

Prices Include VAT, Delivery and Connection Cable

ALL EVESHAM MICROS STAR PRINTERS INCLUDE 12 MONTHS ON-SITE WARRANTY

Star LC 20 Successor to LC 10, 4 fonts, 180/44cps	£ 129.99
NEW! **Star LC 100** Entry level 9-Pin Colour, 4 fonts	£ 168.03
Star LC 200 9-Pin Colour, 4 fonts, 180/45cps	£ 198.58
NEW! **Star LC 24-100** 24-Pin, 5 fonts, 192/64cps	£ 196.23
Star LC 24-200C Superb 24-Pin Colour, 5 fonts, 200/67cps	£ 276.13
Automatic Sheet Feeder for 10" **LC** printers (pls.state model)	£ 64.95
Star XB24-200 COLOUR 24-pin, 80 col. power printer	£ 405.38
Star XB24-250 132 column version of XB24-200	£ 492.33

Citizen 240 COLOUR printer	£ 299.99
Hewlett-Packard Deskjet 500	£ 351.33
Hewlett-Packard Deskjet 500C (Colour)	£ 445.33
NEW! **Hewlett-Packard Deskjet 550 Colour**	£ 562.83
Canon BJ-10EX Inkjet Printer	£ 222.08
NEW! **Canon BJ-200 Inkjet Printer** 360dpi, upto 240cps, 8 fonts, 80-sheet feeder, IBM and Epson emulation	£ 351.33
Epson LX400 budget 10" carriage 9-pin 180/25cps	£ 139.00
Epson LQ100 24-pin 180/60cps, 8k buffer	£ 205.00
Panasonic KXP1124i uprated 24-pin model 300/100cps	£ 279.00
Panasonic KXP2123 good value 24-pin colour model	£ 269.08

TOP VALUE 400dpi HANDY SCANNER

QUALITY SCANNING - AT THE RIGHT PRICE !

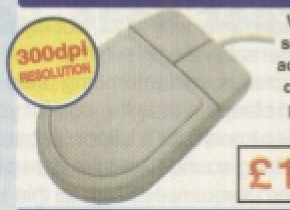
Now includes DAATASCAN PROFESSIONAL VERSION 3 and THE PUBLISHER DeskTop Publishing software

At a genuine 400dpi scanning resolution, this scanner produces truly superb quality scans. Has a full 105mm scanning width, variable brightness control and 100 / 200 / 300 / 400dpi resolution. **Daatascan Professional Version 3**- scanning *and* editing software allows real-time scanning in either line art or in up to 64 simulated grey scales. Provides powerful editing features and excellent compatibility with most DTP and Paint Packages, eg. Deluxe Paint 4, Touch-Up. Also supplied is **The Publisher** DeskTop Pubishing package, ideal for incorporating your scanned images into flyers and newsletters.



STILL ONLY £99.99

TRUEMOUSE



WE GUARANTEE that this is the smoothest, most responsive and accurate replacement mouse you can buy for the Amiga. Excellent performance, now with a 300dpi resolution. Amazing new price!

£14.99 SATISFACTION GUARANTEED

GOLDEN IMAGE OPTICAL MOUSE Amiga/ST compatible - excellent travel+accuracy assured. **NEW LOW PRICE!** .. £ 29.00

TRACKBALL



High performance trackball, directly compatible to any Amiga or Atari ST. Plugs into mouse or joystick port. Super-smooth and accurate - you probably won't want to use a mouse again after using this Trackball ! Full one-handed control. Top quality opto-mechanical design, giving high speed and accuracy every time. No driver software needed !

ONLY £29.95

NEW! A500 ROM SWITCHER

SWITCHING BETWEEN VERSIONS OF KICKSTART ON YOUR A500 IS EASY WITH OUR NEW ROM SWITCHER!

You can improve software compatibility on your A500 Plus! By fitting our ROM switcher, you can alternate between the Kickstart 2 already resident and another version of Kickstart ROM chip, giving you the freedom of choice. Fitting is very simple indeed, and requires no soldering or special technical knowledge. Fitting allows two methods of switching; either by keyboard reset, or by an external toggle switch. **N.B. Kickstart ROM not supplied. A500 Revision 5 boards will require circuit modification.**

ONLY £24.95

Kickstart 1.3 ROM supplied separately	only £ 29.95
Kickstart 2.0 ROM supplied separately	only £ 39.95
A500 Revision 5 PCB Circuit Modification Service	£29.95

ZY-FI Amplified Stereo Speakers

REALISE THE TRUE SOUND POTENTIAL OF YOUR AMIGA WITH THIS PAIR OF FULL RANGE SPEAKERS !



Your Amiga produces fine quality hi-fi stereo sound. Enjoy quality stereo sound reproduction *to the full* with this new design twin speaker system! Incorporates a built-in amplifier with separate adjustable volume controls for each speaker unit. Runs from PSU (supplied) or from batteries (not included).

Speaker Dimensions 160x95x105mm (HxWxD)

ONLY £39.95

A500 HARD DISKS

All the features ...without the price



40Mb MODEL ONLY £229

100Mb MODEL ONLY £329

2Mb RAM Version: ADD £60
4Mb RAM Version: ADD £120

- **SCSI HARD DISK MECHANISMS** *for optimum performance*, fast Access Time & Autoparking
- **Includes its own DEDICATED PSU.** CBM recommends against use of Hard Disks without independent power supply.
- Option for **up to 4MB** additional easy **RAM EXPANSION**, using **'SIMMS'**
- **COOL....** by popular demand, we have fitted a Cooling Fan!
- **GAME SWITCH** allows Games to be loaded without disconnection
- Includes **SCSI THROUGHPORT** at rear for further expansion
- **High quality** metal casing, colour and stylematched to the Amiga 500
- **Includes 'MRBACKUP PRO'** as well as Configuration/Format software

AMIGA 600 — EXCITING NEW PACKS — AMIGA 600

STANDARD PACK

With 12 months on-site maintenance

ONLY £279.99

2MB RAM/CLOCK VERSION £314.99

EPIC PACK

Commodore's 20Mb Hard Disk version

ONLY £449.99

2MB RAM/CLOCK VERSION £484.99



• Built-in TV Modulator • Built-in IDE Hard Disk Controller • Kickstart 2 • 1Mb ChipRAM • Accepts Memory Cards

WILD WEIRD WICKED PACK

Features: Push-over • Grand Prix • Putty • Delux Paint III • 12 months on-site maintenance

ONLY £324.99

2MB RAM/CLOCK VERSION £359.99

Evesham Micros SPECIAL HARD DISK UPGRADED MODELS

We are now able to supply Amiga A600's with larger hard disks. We take a single drive A600 and install a high quality 2½" IDE hard drive. All models are available with 2Mb RAM – please add £35.00

Please note the hard disk installation is not covered by on-site warranty

	60Mb	120Mb
STANDARD PACK	£479.99	£599.99
WWW PACK	£524.99	£644.99

4MB RAM CARD

For any A600.........£149.00

AMIGA 1200

KickStart/Workbench 3.0 • Fast 68020 processor • AGA chipset • CPU/DMA expansion port • PCMCIA expansion slot

£379.99

UPGRADE YOUR OWN A600 TO HARD DISK

Bring the benefits of a Hard Disk installation to your existing Amiga 600 with our easy to fit upgrades.

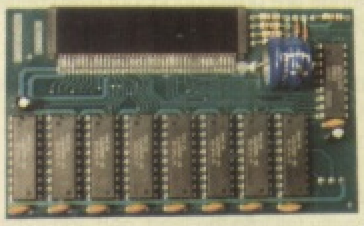
60Mb **£229.00**
120Mb **£359.00**

NEW FROM Evesham Micros A600 1MB RAM/CLOCK UPGRADE

UPGRADE YOUR NEW A600 TO 2Mb WITH THIS SIMPLE PLUG-IN MEMORY UPGRADE!

- Simply Plugs into the A600's trapdoor expansion area
- Increases total RAM capacity of A600 to 2Mb 'ChipRAM'
- RAM Enable / Disable Switch
- Battery-Backed Real-Time Clock

ONLY £39.99



ROCGEN GENLOCKS

OFFERING EXCEPTIONAL VALUE FOR MONEY, the Rocgen Genlocks offer levels of quality, function and sophistication not normally available in this price category.



Genlock Plus

SPECIAL OFFER! ROCGEN MK.II INCLUDES 'HOME TITLER' SOFTWARE FOR A500

GENLOCK MK.II ONLY £79.99

GENLOCK PLUS ONLY £119.99

PHILIPS 15" TV/MONITOR



With its dedicated monitor input, this model combines the advantages of a high quality medium resolution colour monitor with the convenience of remote control Teletext TV - at an excellent low price ! Features dark glass screen for improved contrast.

£249.00 Including VAT, delivery & cable

Philips CM8833 Mk.II Monitor (Genuine UK version), includes cable, 1 Year on-site maintenance and 'Lotus Esprit Turbo 2' game .... £ 229.00

ACCESSORIES

Add-on hard drive for A590 external cased unit with power supply	
40Mb	£ 249.00
100Mb	£ 399.00
MIDI Interface connects to serial port	£ 19.95
Virus Protector fits to last drive in system, protectng all drives	£ 6.95
VIDI-12 Amiga video digitiser package inc. VIDI-Chrome	£ 110.00
Amiga 500 Dust Cover	£ 4.95
Amiga 600 Dust Cover	£ 4.95

PROFESSIONAL AMIGA REPAIRS

Fixed rate repair service, includes disk drive faults..........£ 54.95

Please contact us on 0386-446441

Please note that we reserve the right to refuse any machine which is beyond economic repair

REPLACEMENT POWER SUPPLIES

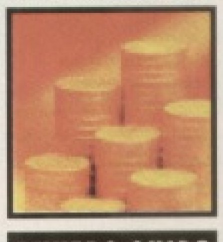


Genuine Commodore Amiga A500 type replacement Power Supply Unit. Good quality 'switch mode' type. Super low price!

ONLY £39.95

Replacement Power Supply for A590 Hard Disk .... £ 49.95

Thinking of expanding your music set-up? Tony Horgan tests a quartet of entry-level professional synthesisers.



BUYERS GUIDE



Synthe

Admit it, four channels of samples just aren't enough. You can use all the tricks in the book, and still find you're a track short when you want to drop in that vocal. What can you do? Well, you could always get yourself a professional synth. Just imagine it... you could farm out all those basslines, chords, beats and melodies to your synth, and free up all four sample channels for those essential loops and vocals.

The high street chain stores are full of home keyboards, but if you're serious, you should go for one of the big boys' toys. Rounding up the entry-level offerings from Roland, Yamaha, Cheetah and Peavy, we sentenced them to a month's hard labour in the CU studio. Here's how they shaped up.

Roland JV-30 Keyboard

Price: £559
Tel: 0252 816181

This is a complete all-in-one pop machine. It's just about got the lot. The first thing that strikes you is how easy it is to use. It may not be completely knob and slider-based, like its big brother the JD-800, but it's easily the most friendly instrument at this price.

Let's start with the piano sounds. If it's house or pop you're producing, these are spot on. Bright and plinky, with a slightly metallic edge, they'll cut through the mushiest of mixes. Add a touch of the onboard chorus, tweak the resonance and cut-off levels, and you can come up with radically different pianos within seconds.

Moving on, there are another 15 groups of sounds, each of which has eight preset variations. More high scores are notched up in the organ section, which includes some very useful standard electric organs, along with a superb Hammond imitation. The strings are pretty good, but even better when fattened up with the many built-in effects. The preset basses are a little disappointing (there's no standard electric bass), but you can easily jazz them up.

This is, however, a synth, so what about the synthetic sounds? These mostly fall into the lead, pad and synth fx categories. Ranging from hard and rasping to silky smooth, they're well suited to ambient and soundtrack work. Of course, you also get synthesised versions of the brass, wind, string and piano sounds. The pads generally aren't as complex as on the bigger synths, or the Yamaha SY-35, but they still get the job done in style.

As well as all of this, you get nine drum kits, covering rock, jazz and electronic styles, and including samples from the TR-808 drum machine (a big plus in my book). It's just a shame that they've gone to all this trouble, but left out those distinctive 909 sounds. That really would have topped it for me. There's also an alternative kit devoted entirely to sound effects – rain, thunder, birds , trains, cars, applause, footsteps, sirens and sci-fi warbles are all on hand to add instant atmosphere to your tracks.

To cap it all, the synth features are a doddle to use. The most drastic alterations come from the resonance and frequency cut-off sliders. Thanks to these, you can create a whole range of new sounds, and change them all in real time as they play. There's also a load of onboard reverbs and other effects to choose from. Sheer luxury! A General MIDI compatible synth that's got all the bases covered, powerful and versatile, but easy to use (helped by an excellent manual), the JV-30 is almost too good to be true.

90%



Cheetah MS6 Module

Price: £349
Tel: 0222 867777

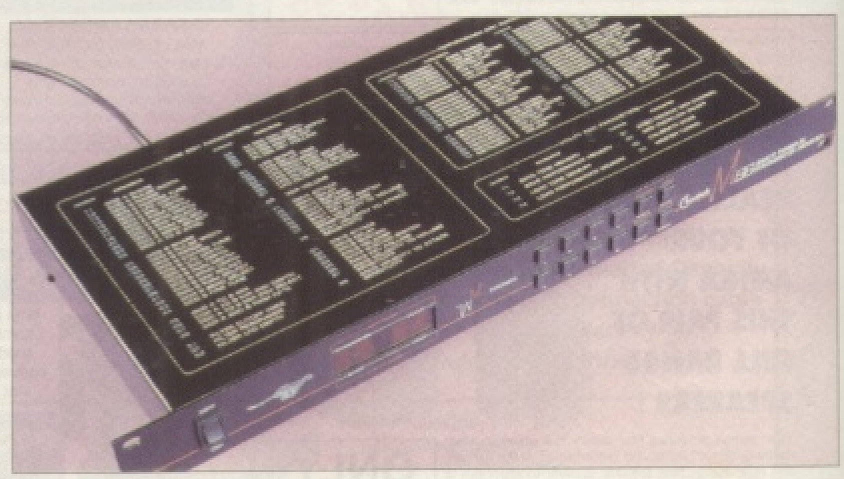
This differs from the others reviewed here in two distinct ways. First, it doesn't have a keyboard, and second, it uses analogue technology to produce its sounds. As it doesn't have a keyboard, you'll need a separate one to trigger it. Any MIDI keyboard will do, but to make the most of the module, it should be capable of sending out velocity, aftertouch, pitchbend and modulation data. It's also quite feasible to use it in conjunction with *MED*, where the Amiga keyboard is a trigger device, but the results won't be great.

As it uses analogue synthesis, you don't get any samples of real instruments. All of the MS6s sounds are created from simple waves, which are oscillated and filtered in various ways. Whereas the sounds on the digital synths have a finite resolution, which becomes more apparent on very low sounds, analogue waves are pure. The result is a smoother sound.

It won't recreate the sound of a grand piano very well at all, but if you want ethereal sweeps, seismic background drones, metamorphing pads and acid bleeps, this is the box for you. It can also knock out a killer sub-bass, and its string sounds will take care of your chord sequences. With all this synthesis power available, it's a shame everything's controlled by a few pokey little buttons and a couple of digits on an LED display. A few sliders would have done wonders, but as it is, if you want to simulate a 303 bassline, you've got to prod lots of little buttons, or try embedding the filter sweeps into your MIDI sequence.

There aren't any built-in effects, but you can simulate reverb by giving sounds long decay times. This isn't a complete music workstation, but then it's not supposed to be. If you're into electronic music, you'll love the sounds it makes. I'd say it's best suited to ambient and acid-style music.

79%





esisers

e

d of a
ut if you
ic back-
g pads
ox for you.
sub-bass,
e care of
all this
s a shame
ew pokey
digits on
s would
t is, if you
ine,
buttons,
eeps into

ffects, but
iving
is isn't a
but then
're into
he sounds

79%

SO HOW DO THEY COMPARE?

You've read the reviews, looked at the pretty pictures and you're still unsure which one to choose? Well, worry no more for here's a side-by-side comparison chart to help make that buying decision so much easier.

Model	JV-30	SY-35	MS6	DPM-2
Price	£559	£599	£349	£675
Multitimbral	16 part	16 part	6 part	16 part
Polyphonic	24 voice	32 voice	6 voice	16 voice
Keyboard	61 note	61 note1	n/a (module)	61 note
Drum Kits	9	yes	0	9 user
Effects	yes	no	no	yes
General MIDI	yes	Digital	no	no
Synthesis	Digital S+S	S+S	Analogue	Digital S+S
Output	Stereo	Stereo	Mono	Stereo

Yamaha SY-35

Price: £599
Tel: 0908 366700

This and Roland's JV-30 are in direct competition. As to which has the upper hand, it's a very close-run thing. The sounds on the SY-35 are arranged a little differently. There are eight banks of eight presets, but there's also a collection of 77 'internal' sounds, and it's these that you can edit and use to create your own original sounds.

All the sounds are made up of either two or four elements. In a two element voice, one part is a sampled wave (of a piano or trumpet, for example), while the other is a synthesised wave. With a four element voice, there are two sampled and two synthesised waves. The upshot of this is that you can get some really meaty pads on the go, with one sound crossfading into another, or just with all four of them layered on top of each other. Plus, there's the Vector synth control – a joystick that allows you to control the mix of all four sounds in real time.

The SY-35's pretty good with the bread and butter sounds, too. The pianos aren't as bright as those on the JV-30, but there's a better selection of basses. Unlike the JV-30, you can strip down a voice to a single sine wave, perfect for sub-basses. The strings section has some lovely full textures, and the brass and lead sounds are just as impressive. There's only one drum kit, but it just about covers the range from dance to rock, although the kicks could be better. Where it loses out is user-friendliness. Setting it up for MIDI sequencing is awkward, and the manual could be a lot clearer. Unfortunately, there's not much potential for editing the sounds with filters and oscillators. It comes down to combining different waves with each other.

Despite this, the power of the onboard sounds is still very impressive. If it's epic pads you want or even just a good general synth, this is unbeatable at the price.

82%

Peavy DPM-2

Price: £675. Tel: 0563 205520

The first thing you notice as you wrestle it out of the box is that the DPM-2 weighs a ton! It's a point well worth bearing in mind if you're going to be gigging, but it shouldn't be much of a problem in a home or studio set-up. Anyway, enough of the physics, on with the sounds.

First, let's have a look at the presets. As far as the basics are concerned, it's a bit patchy. On the one hand, it's got a wide variety of excellent basses, but has a big shortfall in the strings department.There wasn't one string sound that I'd really like to rely on for regular use, but a lot of that comes down to taste.

Similarly, the pianos on offer are only adequate, and lack a good pop variation, but then again this is one of the only synths in this range to have a convincing electric guitar. You couldn't play anything to rival a real guitar solo with it, but used sparingly in the right places, no-one would no notice it wasn't the real thing.

The smooth jazzy organs are nice, although the fake Hammond could be a lot fuller. If big pads are your thing, you'll be well catered for. Layering sounds is simple, so you can easily come up with your own spooky washes and dreamy warbles. There's also a big drum kit, with a range of kicks and snares that should just about have something for everyone, although as usual, the samples do have a rock bias, so you'll probably still want to sample your own if you're making dance music. You're free to remap the drums any way you like, and you can even include any single sample in an instrument patch. For example, you could overlay one of the bassdrum samples onto a bass synth sound, to give it more punch, or include a pitched-down crash cymbal in a big pad.

Editing is made fairly easy with the multi-purpose data slider, and the generous amount of buttons on the front panel. Layering waves is simple, and there are a plenty of effects variations to spice up your sounds, including reverb and gated reverb, an exciter, EQ, panned delays, choruses and distortion. The combination of resonance and filter controls gives the synthesising potential a big boost.

Although the DPM-2 does have its shortcomings, it's still a very powerful and versatile synth, but in the light of the competition from Roland and Yamaha, it does look a little over-priced.

70%



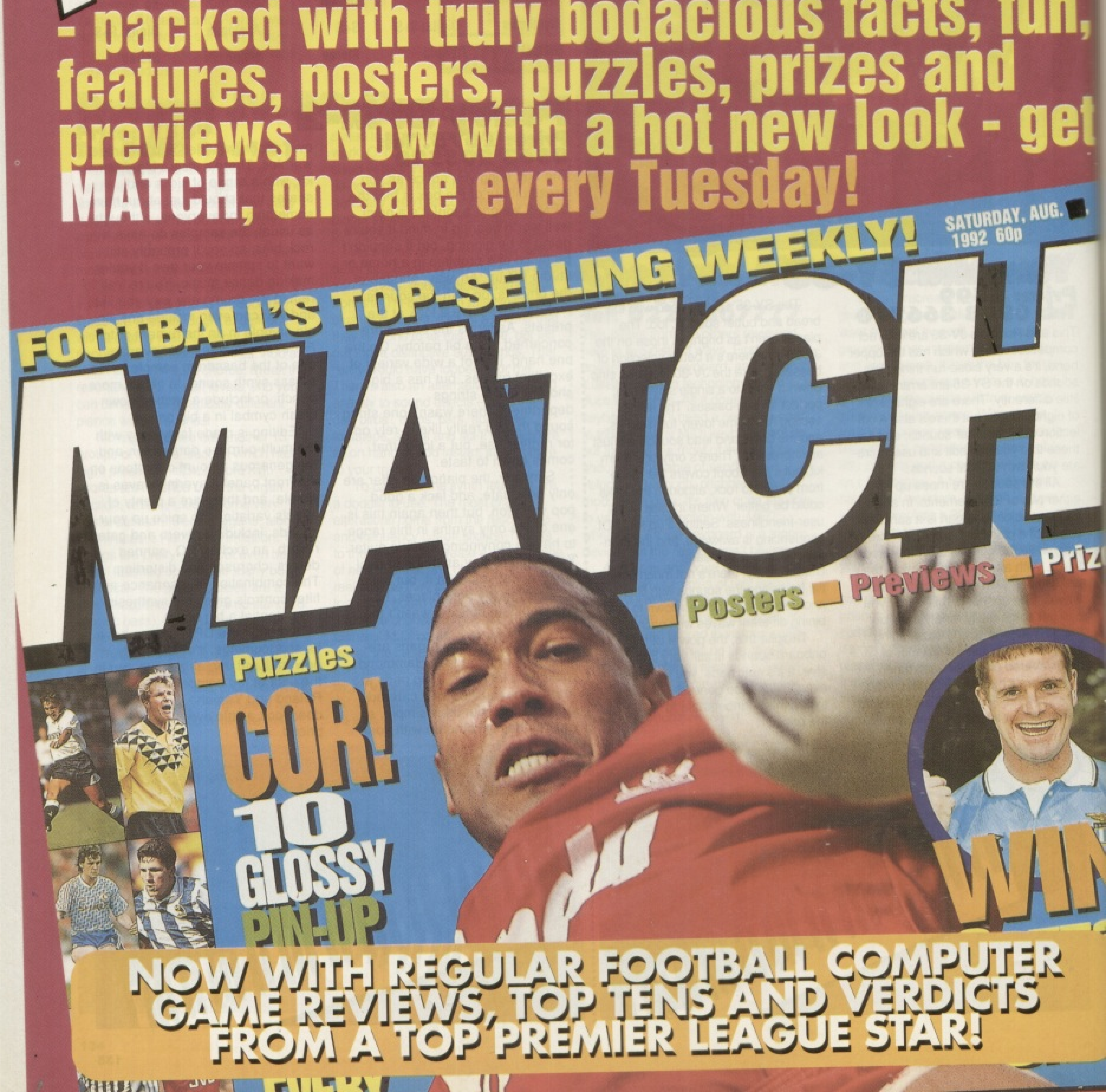


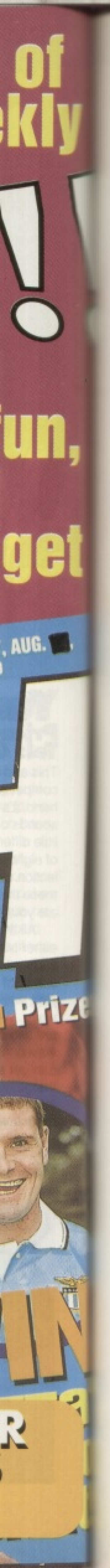


Party on with your regular copy of the most excellent football weekly

Waaaaaaaaaaayyyyy!!

- packed with truly bodacious facts, fun, features, posters, puzzles, prizes and previews. Now with a hot new look - get MATCH, on sale every Tuesday!





PDSCENE

Every month we get skip loads of PD disks sent in for review. Tony Horgan has a rummage through the latest entertainment disks. Be safe, be scene.

SKYBOARD MUSIC COLLECTION

music compilation

Here's a quality collection of tracks from various sources. There aren't any visuals, apart from the menu screen, but the tunes are pretty good (six of them in all), even if some of the samples are knocking on a bit now. The remix of Playing With Knives is well sampled, and there's also a short nape-tickling clonky version of Moby's Go! (well I still like it anyway). A couple of the others aren't so impressive, but the better tunes are well worth a crank.

Disk no. 2352. Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, WF1 1DH. Tel: 0924 366982. Price: £1.75 (including P+P).



84%

SAVINGS CERTIFICATES AD

animation

Have you seen those Gary Larson ads on the telly, the ones for National Savings Certificates? Not as good as his original cartoons are they? Anyway, if you do like them, you might be interested in this computerised version of the butterfly and frog advert. The brief sequence has a butterfly emerging from a cocoon, only to be immediately eaten by a stealthy frog. The smug frog isn't smug for long though – a second later he's squashed under the wheels of a car. Not a side-splitter by any means, but still one of the better anims of late.

Disk No. 2372. Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, W. Yorks, WF1 1DH. Tel: 0924 366982. Price: £1.75 (including P+P).

72%



CLAUSTROPHOBIA

demo

Wahey! Dive in! The tunnel effects on Claustrophobia are brilliant – you just want to jump into the screen and slide down the twisty tubes. Apart from these though, the rest of the demo isn't really up to much. There's a weedy bit of plasma, some brief chequerboard zooms (heavy stuff), and a bleepy soundtrack reminiscent of the Budbrains' Africa demo. Definitely worth a look for the tunnels though.

Disk No. 2452. Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, WF1 1DH. Tel: 0924 366982. Price: £1.75 (including P+P).

67%



COMIC ART 2

slideshow

If Superheros are your thing, you'll love this slideshow from Cyber. Featuring The Hulk, Spiderman, The X Men, Thanos, Wolverine, Rogue and Spawn, it's a classy collection of 16 hand-drawn pictures. Expertly crafted in colour hi-res interlace, they're some of the best you could hope to see on the Amiga.

Disk no. P0006. Available from: Cynostic PD, 85 Wyken Croft Road, Coventry, CV2 3AD. Tel: 0203 613817. Price: £2.00 (including P+P).

90%



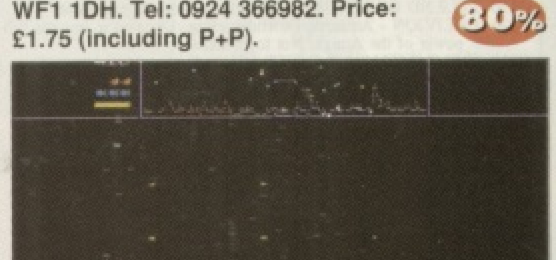
OBLIVION

game

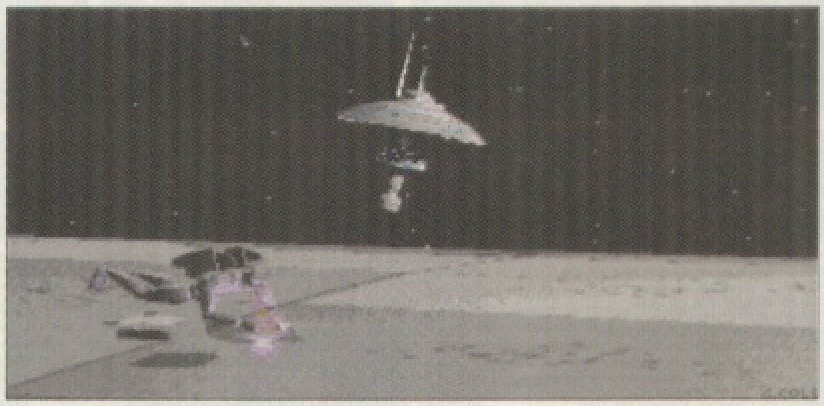
As *Defender* clones go, this is definitely one of the better ones on the PD circuit. It's got a lot of the important bits right, like the meaty sound effects (sampled from the original by the sound of it), and the big wooshy laser that stays on the screen for a second or two. The programmers have added vertical scrolling, to increase the size of the play area, but it can get a bit disorientating. If you're still looking for your ideal *Defender* clone, this could just be the one.

Disk no. 2364. Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, WF1 1DH. Tel: 0924 366982. Price: £1.75 (including P+P).

80%



THE AD
animation



From Craig Collins, the man who gave us Speed Limit, comes The Ad, another ray-traced sci-fi animation. You had to watch Speed Limit a few times to make out what was going on, but I've watched this one for ages, and I still can't figure it out. Set in outer space, it opens with an astronaut welding part of a ship. From here it all gets a bit confusing, with ships darting around and explosions going off everywhere. To make matters worse, it's very dark, so even if you could follow the plot, you'd have a hard time actually making out the graphics. A bit of shame really, because there are some nice touches dotted around, and some good animation on the main character.
Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorks, WF1 1DH. Tel: 0924 366982. Price: £4.25 (including P+P).

68%

LCD DREAMS
game



Do you ever think 'I wish I could play those little LCD games on my Amiga'? No, neither do I, but whether you want to or not, now you can with LCD Dreams. It's a compilation of four games: Fire, Octopus, Oil and Parachute. Just like the original games, the sprites can only move along preset paths. If you can get into the spirit of the thing, and imagine your Amiga is actually a giant LCD game, it's quite good fun. Otherwise it could look pretty naff. It's almost good because it's crap, if you know what I mean.
Disk no. 2356. Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorks, WF1 1DH. Tel: 0924 366982. Price : £1.75 (including P+P).

71%





TRANSPLANT
game

This is one of the best PD zappers for ages. It's a bit like *Asteroids*, but instead of the ship moving around on a still screen, the ship stays in the middle while the screen scrolls and rotates around it. Super-smooth scrolling gives it a good arcadey feel, and you're not short-changed on firepower. New levels bring new aliens, and there's quite a bit of variety here for a PD game. A tad on the easy side, but a solid blast all the same.
Disk no. 138. Available from: Alpha PD, 3 Wickham Street, Easington, Peterlee, Co Durham, SR8 3DJ. Price: £1.45 (including P+P). (Not A500+ compatible.)

90%





LEGALIZE IT 2
music demo

Not everyone writing music demos is obsessed with techno – Anarchy's Legalize It 2 has a smooth blend of jazz and funk spread over a couple of disks. There are eight listed tunes, plus another seven hidden tracks. Sound quality is very clear, and there are some nice live-sounding samples, like the slapped basses and drums. 'Pleasant' is a word that springs to mind – not head-banging or spine-tingling, just laid back easy going. It's rounded off by a slick front end. If you've had enough hardcore breakbeats to last you a lifetime, this could be just what you've been waiting for.
Disk no. 2380 a+b. Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorks, W1F 1DH. Tel: 0924 366982. Price: £3.00 (including P+P).

88%

CATWOMAN
slideshow

After seeing a disk like Comic Art 2 (also reviewed this month), a slideshow of stills grabbed from a pirate video doesn't impress. This is one of those demo formats that just doesn't cut it anymore. We've all seen digitised graphics before, and these grey-scale grabs are pretty tedious. One for real Batman enthusiasts only.
Disk no. 2365. Available from: 17 Bit, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorks, WF1 1DH. Tel: 0924 366982. Price : £1.75 (including P+P).

22%



SLOW DOWN!
animation

Cartoon animations should be funny, or at least mildly amusing. This one is just too predictable to be either. Against a backdrop of the Arizona desert, a tortoise trundles along an empty road, while Road Runner buzzes past left and right. The tortoise gets annoyed, turns into Wile E. Coyote, and beats the crap out of Road Runner. We've seen it all before.
Available from: NBS, 1 Chain Lane, Newport, Isle of Wight, PO30 5QA. Price: £2.50 (including P+P).

61%





GOT AN A1200?

Sorry! Last month we said that Spaceballs' brilliant State of the Art demo doesn't work on the A1200. In fact it does, if you turn off the memory caches and use the old chip set emulation. Now you've got no excuse to be without a copy. It's available from all good PD suppliers.

United Public D

The innovators

Look out for the CER logo!

THE BEST SELECTION OF PD IN THE UK !

GAMES

PG003 AIR WARRIOR Good flight Sim + (not A600!)
PG006 ANTEP & SLOT CARS role playing game+ Y
PG008 ASI 1 Tanx, Rollerpede, Avatris Amigoids etc+
PG009 ASI 2 Invaders,Bally 2,Missile command etc!+
PG010 ASI 3 Megaball & Drip Superb !+
PG011 ASI 4 Frogger Go Moku,Cracker Jumpy etc!+
PG012 ASI 5 Raid, Go Looly & Retaliator+
PG013 ASI 6 Pacman Downhillchallenge Welltrix etc!+
PG014 ASI 7 Moonbase, Trix,Nightworks Clauderunner!+
PG015 ASI 8 Airace2,Hball,Snakepit & Numberfumbler!+
PG016 ASI 9 Features Battle pong & Blizzard! +
PG017 ASI 10 Escape, Pipeline, Pickout & Sys!+
PG018 ASI 11 Dad, Connex,Reversi Towers & Trippin+
PG019 ASI 12 Llamatron, Car, Powerpong. Fab!!+
PG020 ASI 13 Twintris, Squamble,Block it,Ball etc!+
PG021 ATIC ATAC Really playable ! + Y
PG024 BLACKJACK Good card game !+
PG026 CASTLE OF DOOM Excellent! Get it + Y
PG028 COLOSSUS & WORLD Fab adventures !+ Y
PG029 CROSSWORD COMPILER As it says !+ Y
PG032 DRAGONS CAVE D&D style game Mega+ Y
PG034 ETERNAL ROME Strategy & DOMINOES+ Y
PG046 HACK Great text adventure-infocom style! +Y
PG047 HOLLYWOOD TRIVIA Nice Trivia Game! +
PG048 HOLY GRAIL One of the best Text adventures+ Y
PG053 LARN A superb text adventure game + Y
PG059 LORE OF CONQUEST space trading D&D game Y
PG062 MENTAL IMAGE 1 Gridrunner invaders & rebound+
PG068 NO MANS LAND Hi tech war game-shoot em up. +Y
PG071 POM POM GUNNER Like beach-head on the 64+Y
PG072 PROPERTY MARKET Become a millionaire !!!
PG074 RETURN TO EARTH Elite space trading game! +Y
PG076 SEVEN TILES Speedball type game-MEGA!
PG079 SEALANCE A submarine strategy game +Y
PG094 TRAIN CONSTRUCTION KIT make own tracks+Y
PG101 THE INSIDERS CLUB Stocks & shares game
PG108 ASI 14 ChinaChallenge2 & Amiga Columns!+
PG110 SUPER SKODA CHALLENGE Nice car racegame!+Y
PG121 A500+ GAMES PACK 21 games to run on a plus+Y
PG124 TOTAL WAR Great new Risk type game,ok plus!+Y
PG127 AIRMANIA Super platform game from Addware + Y
PG131 ATLANTIS A nice looking strategy game! +Y
PG132 ASI 15 Battlecars Lettrix & Mambamove!
PG133 ASI 16 Wastelands, Mission X, Pacman +
PG134 ASI 17 Tomcat, Defenda, Jetman Bugblaster+
PG135 ASI 18 Henry in Panic Skyflyer Omega race!+
PG136 ASI 19 Growth,FranticFreddy,Biplane & more!+
PG138 BATTLE OF BRITAIN & WAR strategy war games+Y
PG139 DUNGEONS OF MADROJ Excellent D&D game+Y
PG140 MIND GAMES Stacks of fun with this !Y
PG141/3 SWORD OF WARLOCK RPG adventure 2drives
PG146 ASI 20 Microbes Hollywood trivia Coin drop +
PG149 A NIGHT AT THE TOWN Witty text adventure+Y
PG153 WAR very good strategy/arcade game+Y
PG155 ASI GAMES 21 Zeus Tettrix Battlements Dragntiles+
PG156 ASI GAMES 22 Lemmingoids,Wizzys quest Duel etc+
PG157 ASI GAMES 23 Quick money,BIP,Interferon Arcadia+
PG164 GAME TAMER 2.3 joystick tester & 268 cheats+Y
PG166 RAID III Wicked new shootemup !!!! +Y
PG167 SERENE III From the author of Raid III+Y
PG169 ASI GAMES 24 Revenge Dux Croak 3d maze etc!+
PG170 ASI GAMES 25 Mr Brick,Copper,hemeroids,E Type+
PG171 ASI GAMES 26 Superpacman 92 Smash tv Ashido
PG172 ASI GAMES 27 Addictive card games. Really good!+
PG174 AMOS CRICKET Shareware cricket game,1 or 2plr+
PG175 SPACETRAX 2 player shoot each other up game+Y
PG176 TECHNOBAN GAME Quite a nice puzzle game! +Y
PG177 HELLZONE Stunning R-type clone-GET THIS! +
PG178 MENTAL IMAGE 2 Three Excellent new games +
PG181 STRIKEBALL Baseball type game done in Amos +Y
PG182 ETHOS Simple graphical adventue Sinbad style+Y
PG183 CATACOOMBS great D&D style game. VG.GFX +Y
PG184 FATAL MISSION Very good Shootemup game +
PG186 ASI 28 Doody, DrMario, Invaders2, Madbomber2+
PG187 ASI 29 DOG, Rome, Nova, B-Bal, Atax, Quadrix+
PG188 ASI 30 Bounce & Ble 1, Total Fire Tank attack!+
PG189 SPACE RESCUE Super scramble like shoot em up!+
PG190 TOP SECRET An exellent quality platform game!+
PG191 ACT OF WAR New space strategy game! +Y
PG193 MASHIE NIBLICK Yes,a golf game for your Amiga+Y
PG195 KLAKTRIS Suberb quality tetris type game!+
PG197 ANDYS AMOS GAMES 6 good games on here!+Y
PG198 AIRPORT Now you control an airport! +
PG199 CASHFRUIT Nice fruit machine game! +Y
PG200 ALL ROUNDER CRICKET New cricket game!+Y
PG202/3 IRON CLADS Good strategic war game!(2)Y
PG204 THRALLBOUND Text adventure with graphics!+Y
PG205 SOCCER CARDS Football managing game!+Y
PG206 ASI 31 Arazmaz,Crazy pipe, revolution etc!+
PG207 ASI 32 Blob, Sector one & Firefighter! +
PG208 ASI 33 Hyperball & War! +
PG209 ASI 34 Trailblazer, Yelp, Qbic Rushour! +
PG210 ASI 35 Poing, Snakepit, Cybernetix etc!+
PG211 ASI 36 Mother lode, Wonderland, Kong etc!+
PG212 ASI 37 Klaktris. Ghostship, Pacer etc!+
PG213 ASI 38 One on One,Briidy,Skyflyer2,Transplant!
PG214 LEGEND OF LOTHIAN Superb Ultima type game!!+Y
PG215 ASI 39 Lots of card games on this disk! +
PG216 ASI 40 Disk full of sliding puzzle games!+
PG217 ASI 41 Pacman deluxe, Hellzone Leap II etc+
PG218/9 CLASH OF THE EMPIRES Super strategy!+ Y

EDUCATION

All ok on A1200!
PE001/5 EDUCATION SET science programs for ages 11+ +
PE006 KIDSPAINT Fab little talking colouring book+
PE007/8 LEARN & PLAY Maths, spelling etc. 5-10 yrs +
PE009 STORYLAND 2 Save toyland from the witch! +
PE010 TOTAL CONCEPTS ASTROMOMY Book on a disk.+
PE011 TOTAL CONCEPTS DINOSAURS Book on a disk+
PE013 SIMON & SPACE MATHS Talking maths program
PE014 SPANISH, FRENCH, GERMAN TUTOR Translator +
PE015 TREASURE SEARCH find the lost treasure ! +
PE016 COLOUR THE ALPHABET learn letters & colours! +
PE018 TYPING TUTOR, Superspell Budget & Mscalender! +
PE019 DUNKS DTP A sort of DeskTopPublisher for kids +
PE020 MATHS DRILL Good maths disk for the young! +
PE021/4 SCIENCE Very good four disk set!+ (4)
PE025 FRACTIONS & SILHOUETTES Good maths tutor+ Y
PE026 WW II FACTS Good historical program!+ Y
PE027 AMIGA BEGINNER Learn to use your machine+ Y

BUSINESS

All ok on A1200 except PB006!!
PB001 AMICASH bank management program+
PB002/3 ANALYTICALC Superb spreadsheet!+ (2)
PB004 ASI LABEL PRINTERS 3 of the best+
PB005 BANKIN control your cheque book! +
PB006 BUSINESS CARD MAKER Nice program+
PB007 CLERK Complete accounts package+
PB008 DESKTOP PUBLISHER Simple to use +
PB009 FLEXYBASE DATABASE Address keeper+
PB010 JOURNAL Keep track of finances
PB011 MISC.BUSINESS Geotime, Grocery list, Calc
PB012 QBASE Simple 8 field database
PB013 QED Simple & effective text ed+
PB014 RIM DATABASE Fully relational !!+
PB015 TEXTPLUS V3.00 The BEST Wordprocessor +
PB017 VISICALC SPREADSHEET Simple to use+
PB019 BUSINESS LETTERS contracts, letters + more+
PB020 TEXT ENGINE 3.4 NEW Version !!! +
PB021 AMIBASE PRO. Powerful easy to use Dbase +
PB022 BBASE II v5.5 A fast & easy to use database+
PB023 FORMS REALLY UNLIMITED form creation prog+
PB024 LAST WILL & TESTAMENTS Just in case !+
PB025 EDWORD Brand new wordpro - V.good +
PB026 AGRAPH Superb Program graphing data +
PB027 BOILERPLATE Business letters & Wordpro +
PB028 LITTLE OFFICE Intergrated Wpro,Sst,Dbase,Gfx+
PB029 ADDRESS PRINT Good label printing program! +
PB030 THE MONEY PROGRAM Home accounting! +

UTILITIES

(Note: "Y" = ok on A1200!)
PU002 A-GENE Good geneology program + Y
PU004a/b A64 EMULATOR NEW VERSION 2.0 (2)
PU005 AMATEUR RADIO 1 Interest to radio hams + Y
PU012 ASI GRAFFIX UTILS graphics convertors etc+Y
PU013 ASI BOOT UTILITIES bootblock utilities + Y
PU015 BIORYTHMS, STARCHART 2 Good programs+ Y
PU021 C-LIGHT RAY TRACER Good program+ Y
PU022 CHEMESTHETICS molecule displayer + Y
PU036 CURSER BASIC COMPILER Just what you need!+ Y
PU037 D-COPY The best PD disk copier & more + Y
PU039 DBW The foreunner to Skulpt 3D !!! + Y
PU047 DOPE INTROMAKER Make your own intros
PU048 DYNAMITE FONTS II CutNPaste fontscreens Y
PU049 DYNAMITE FONTS More CutNPaste Fonts Y
PU055 ELECTROCAD DEMO circuit designer +
PU056 EXILE FONTS Excellent CnP fonts+
PU058 FONTS AND RAM MANAGER BIG video fonts+
PU059 FONTS & SURFACES Backdrops & fonts+ Y
PU062 GRAPHICS UTILITIES Various misc. programs+Y
PU063 HAMLAB Convert VGA PC >IFF/HAM + Y
PU064 HARDDRIVE UTILS MRBackup & FixDisk & more+Y
PU065 ICONMANIA Program icons & more !+ Y
PU066 ICONS Cramm packed with icons !+ Y
PU067 IMPLODER V4.0 Megacrunching Util+ Y
PU071 JR COMM 1.02 Modem users comms package Y
PU072 METALLION UTILS Font Editors & more utils+ Y
PU073/76 KING JAMES BIBLE Old&New testaments (4)+ Y
PU078 M-CAD Hires design package. Excellent + Y
PU080 MESSY-SID Read/Write PC Files, Brilliant!+ Y
PU083 MORSE PROGRAMS for the radio hams. Y
PU086/7 NORTH C 1.3 (2) Complete C compiler & libs+ Y
PU088 NORTH C 1.3 This is the packed 1 disk version!+Y
PU089 PASCAL COMPILER needs good CLI knowledge+ Y
PU091 PENDLE 200 MEGAUTILS An essential collection+ Y
PU095 PRINTER DRIVER GENERATOR & new drivers+ Y
PU096 PRINTER DRIVER UTILITIES Various utils etc. Y
PU097 PRINT STUDIO V1.25 Prints pics & text etc.+ Y
PU108 ROT A simple 3D drawing package.Very popular.+Y
PU109/10 (2 disk) Structured clipart for Ppage + Y
PU112/3 SOMETHING FOR NOTHIN Video Utils&Fonts+ Y
PU115 ST EMULATOR Run Atari ST software !! 2 Drives
PU117 SUPERKILLERS Virus Killers! You need this! +
PU121/2 TV GRAPHICS Dpaint backdrops&Fonts+(2) Y
PU124 ULTIMATE ICONS Iconmaster,Iconlab,+ Y
PU129/30 VIDEO APPLICATIONS Video utilities+ Y
PU136 ZX SPECTRUM EMULATOR Now with sound +
PU139 GRAPHICS CONVERTERS PC>AMiga gfx Converter
PU140 LITTLEBENCH File copier & utils Dos2 only
PU141/2 TAROT II Learn about your stars !+ Y
PU143 OPTIUTILS 1 Crammed full ! Get it+ Y
PU144 OPTIUTILS 2 Get this disk too ! + Y
PU145 OPTICOMMS 1 Ncomm 1.921 Lharca, Zoo Arc+ Y
PU149 ELECTRONIC PROTOTYPER Veroboard designer Y
PU150 FOOTBALL LEAGUE ED Update league positions Y
PU151 BROTHERHOOD UTILS 1 Dcopy,Scenery,Qed +Y
PU152/66 CLIPART SET: 15 Disks of the BEST clipart +Y
PU167 MULTI-PLOT Superb data plotting program ! +
PU169 GELIGNITE FONTS CutNPaste fonts+
PU170 P-SUITE Disk magazine maker+Y
PU171 OPTICOMMS 2 Ncomm 2 & more +Y
PU172 WORDPOWER Solve Anagrams/Crosswords+ Y
PU174 ASTRO 22 professional astrology now V2.42! +Y
PU175 GELIGNITE FONTS II Excellent IFF fonts+Y
PU176 GELIGNITE FONTS III More of above!!+
PU177/8 BENCHMASTER Windowsbench & Messysid!!
PU182 STOCK ANALYST Technical analysis program+Y
PU183 AMYGEN Excellent geneology program+Y
PU184 PROCALC V1.0 professional calculator!
PU185/8 COSMOPOLITAN FONTS (4) Packed with fonts+Y
PU189 TRONIK VIRUS KILLERS 21 virus killers & docsY
PU191 LANDBUILDER fractal land generator+Y
PU192 SID 2 Get this ! directory util !!! MEGA!+Y
PU197 MOBED 2 Dpaint for Sprites & bobs+Y
PU198 VIDEO WIPES Masks & fades Dpaint 3/4 +Y
PU201 MALICE FONTS Excellent tiny fonts for Dpaint+
PU202 CYCLOPS Weird Plasma/fractal creator ! +Y
PU203 SCOPE 184 utils & clips for Ppage Y
PU205 PC TASK Wicked PC Emulator Get it !!! +Y
PU207 MULTISID Combine SID2 & Multidos(PC>AMIGA)+Y
PU208 ASI HANDYTOOLS 3 mega compilation of utils Y
PU209 FRED FISH CATALOGUE contains FISH 1 - 680 +Y
PU210 PCQ PASCAL Latest version of Pascal compiler+Y
PU211 AMIGA PUNT A horse race predicting program!+Y
PU212 PERM CHECK PLUS a pools prediction prog Y
PU213 RACE RATER Another horse racing program!! +Y
PU214 DIR WORK A Sid type file copying program! +Y
PU215 CAPTIONATOR Superb shareware video titling!+Y
PU217 BROTHERHOOD UTILS 2 utilities for the plus!+ Y
PU219 WBHACKS+ collection of hacks for + owners+ Y
PU221-225 8 COLOR ICONS Hundreds of new icons +Y
PU226/7 C-EYES FONTS For use in Dpaint, WB, etc.(2)+Y
PU228 PROBABLY RIPPER Create disks easily with this!+Y
PU229 JPEG 24 bit graphics compression util disk! +Y
PU230 MORE PRINTER DRIVERS new printer drivers!+Y
PU231/5 PAGESTREAM FONTS 5 disks super fonts!+ (5)Y
PU236/7 SCOPE197/8 Adobe type fonts, 2 disks full! +Y
PU238/9 M.O.R.C. Mouse operated rune caster,oracle !+
PU240 FREECOPY V1.4 powerful disk copying program!+Y
PU241 CALORIE BASE Useful for people on a diet!+Y
PU242 TEXTPLUS PROFESSIONAL 4 needs hard drive!+Y
PU243 ASPICE Circuit analysis program!+Y
PU244 BON APPETIT This is a recipe database program!+Y
PU245/256 C MANUAL Latest version on 12 disks! (12) +Y
PU257/61 PAGESTREAM FONTS 2nd set of fonts!+Y
PU262 RICHARD SMEDLEY COMP II Mortgages etc!+Y
PU263 LYAPUNOV Fabulous & unusual fractals!!+Y
PU264/8 OUTLINE FONTS For Pro pagev3 ONLY!!+Y
PU269 CONSTELLATION Demo of shareware program!+Y
PU270 STARCAT2 Easy to use cataloge maker!+ Y
PU271 CLUMPY ICONS A disk crammed with icons+ Y
PU272 GOLF RECORDER Database for golf scores!+ Y
PU273 PC<>AMIGA Similar to Messysid, + docs!+ Y
PU274 TRONICAD V1.0 Electronic circuit design!+Y
PU275 FLIT Convert Autodesk anims to IFF+
PU276 BBBS A Bulletin board system! + Y
PU277 PROTEUS BBS Another comms program! + Y

ANIMATIONS

PA039 ERIC-S AMY VS WALKER Cute & sexy! 1.5M Y
PA040 ERIC-S BATMAN vs JOKER Very funny!!!+Y
PA042 ERIC-S COYOTE STRIKES BACK 1mg too! +
PA043 ERIC-S MORE AEROTOONS Very witty !!!+ Y
PA045 ERIC-S STEALTHY II Mig-29 vs Stealthy !+Y
PA046 FRANKLYN THE FLY Day in the life of a fly! +
PA048 GYMNAST ANIM Gymnast swings on bars! +Y
PA053/4 LIGHT CYCLES (2) Tron animation+
PA056 MAGICIAN II Good RT animation+Y
PA072 THE JUGGLER A classic amiga demo!+ Y
PA074 THE WALKER vs The Helicopter - Mega !+ Y
PA075 THE WALKER vs A2000 A classic ! + Y
PA085 JET ANIMATION Fractal Flight but better! +Y
PA086 FRACTAL ANIMATION full screen low flying anim+Y
PA090 TOO MUCH 3D Ship flys out of monitor!! + Y
PA091/3 GAS TURBINE, STEAM & PETROL ENGINE (3)+Y
PA094 AMY JOGS,WALKS & SNEEZES by E Schwartz! +Y
PA096 HOW TO RUN INTO A WALL by Eric Schwartz! +Y
PA097 SMALL STATION AT KHERNE New 1mg version+Y
PA099 ATF AGILITY new ES anim, very witty as usual+Y
PA100 VTOL CONTEST Check out this new ES anim ! +Y
PA101 DOLPHIN DREAMS Great Dolphin anim! + Y
PA103/4 KINGFISHER 2 Superb bird animations!+ Y
AGATRON
All ok on A1200!
AGA01 RED LOTUS Spinning down the road. Fantastic !+
AGA03 STAR TREK - Shuttle fly past - Great ! 1m +
AGA09 STAR WARS - Fighter fly by, impressive 1m +
AGA10 STAR TREK - Enterprise in dry dock. Incredible+
AGA20 Huey 2 A helicopter leaving a landing pad.+
AGA23 FLEET MANOEVRE Stunning animation! 1m +
AGA24 KULI PEN animation & Ping pong. Great! 1m +
AGA25 THE RUN , a suberb car chase 1mg +
AGA31 PORSCHE anim rising out of table 1 mg. +
AGA33 PROBE Bird of prey animation & Klingonhit! 1m+
AGA35 SPACE PROBE, great anim of probe zooming off!+
AGA36 BIRD OF PREY, loop the loop animation 1m +
AGA37 TOBIAS GOES KNACKERS - Check this out ! 1m +
AGA38 TOTALLY WICKED ! Shuttle & Enterprise (2 MEG))
AGA39/53 AGATRON SPECIAL! Yes, a 15 disk anim!+Y
AGA54/62 AGATRON SPECIAL! a 9 disk anim, fans only+Y

POWERANIMS

PP001/2 ANTI LEMMINGS (2) This is Brilliant! 2M
PP003 AT THE MOVIES Cute anim of Amy squirrel 1.5M+Y
PP008/10 BUZZED (3) Great anim of wasp crashing! 2M
PP011/12 DATING GAME (2) Very witty!, Get it. 3.5M!
PP016 GULF WAR Another ES production! Good 2M! Y
PP021/24 LANDING (4) Tobias Richter poweranim 4M!
PP025/27 STATION AT KHARN (3) Incredible 2M demo Y
PP040/43 AT THE MOVIES II (4) Hilarious ! 1mg>3mg
PP044/45 AMY V WALKER II (2) Another witty ES demo 3M
PP046 SWEET REVENGE Coyote vs Roadrunner ! 1.5mg+Y
PP050 UNSPORTING Wicked aerotoon by Schwartz+ 2M Y
PP051/2 CHARLY CAT Super Shwartzlike cartoon! 2mg.Y
PP053/4 CHARLY CAT AT THE BEACH 2nd fab anim 2mg!Y
PP055/6 APC MISSION Superb walker & tank battle 3mg!
PP057/9 CHARLY CAT CATCHES A CANARY Fab! 3MG.
PP060/3 CHARLY CAT MOUSTERMIND Great! 3.5MG.
PP064 DUNCAN DUNG BEETLE Unusual 2mg animation! Y
PP065/6 CHARLY CAT SNOWJOKE Latest anim 2mg.+ Y
PP067/9 SPEED LIMIT 3mg motorcycle race! + Y (3)
PP070/1 LEMMINGS REVENGE Very amusing anim! 2mg Y
PP072/3 TALES OF A TIME TRAVELLER Super movie 3mg!

DEMOS

PD005 AMOS 3D DEMO Shows some great effects!+ Y
PD018 CHAOS ROCK Fab light show with fractals!+
PD068 PHENOMENA ENIGMA Absolutely brilliant!+ Y
PD094 SCOOPEX MENTAL HANGOVER A classic+
PD097 SILENTS GLOBAL TRASH Incredible!!+
PD130/34 ALCATRAZ ODDESSY Awesome!! Ok on 500+!
PD139 TRACKERS POWER & AGONY Unusual vectors! +
PD142 FINAL CONFESSION Music & Plasma effects!+ Y
PD159 ANARCHY IN THE KITCHEN Some good FX Fab!+
PD164 DESIRE MENACE Good Psycho rave demo + Y
PD165 DARK DEMON Mega new demo .... get it+ Y
PD170 PIECE OF MIND Good 3D vector effects. +
PD171/2 SILENTS EXPOSE(2) Incredible Get it !+ Y
PD175 REFLECT SOUND VISION Super effects & music!
PD176 CHAMELEON DEMO Very nice vector demo!+ Y
PD177/8 TRSI TIME ZONE New, some good effects!+Y
PD179/80 HALF BRAINS SUNSTORM Very good demo!+

MUSIC DISKS

PM001 100 GREATEST 64 TUNES 100 fab 64 tunes!+
PM010 AMEGA PARTY WINNERS Four WICKED songs+ Y
PM012 AMIGADEUS CLASSICAL Eine Kleiner etc. + Y
PM016 BEATLES SONIX Nice music+ Y
PM022/23 CLASSICAL MUSIC Bach, Handel etc +Y
PM027 D-MOB MUSIC 3 House music remix, good! +
PM030/34 DIGITAL CONCERTs 2-6 Excellent house/dance
PM035 DIGITAL DEBUSSY Fab Rob Baxter conversions!+Y
PM036 DIGITAL DEBUSSYII classic Debussy music!+ Y
PM058 MAG FIELDS CHIP FESTIVAL Full of chip music!+Y
PM059 MANIACS OF NOISE This is brilliant!+
PM062a/62b VIVALDI - FOUR SEASONS (2) V.Good !+ Y
PM090/91MOZART HORN CONCERTO 4 by H.Gammon+ Y
PM092 PIANO TUNES Nine piano songs- good + Y
PM096 STAIRWAY TO HEAVEN Rendition of the
PM105/6 KEFRENS MEGAMIX Fabulous dance
PM114 UPROAR SPLIT BEAVER MIX rave mega
PM115a/b CHROME Brilliant music disks ! Y
PM121 NIGHTBREED MUSIC DEMO8 Rave music
PM122/4 PLAYSID 2 (3) You must get this !!!!! +Y
PM125 PLAYSID inc.RobHubbard, ManiacsOfNoise
PM137 KEFRENS MEGAMIX II Very good !! dance
PM141 HARDLINE MUSIC 7 groovy synth-style trac
PM150 DESKTOP HARPSICHORD RECITAL Clas
PM152 PARADISE: NO BRAIN NO PAIN Good for
PM153 BIZE: KILL DA BABE 6 tracks of rave music
PM154 PULSE Yes, pulsating rave music again!! +
PM155 VINE G-RAVE 5 more good rave tracks!!! +
PM157/8 HEATBEAT UPDATE 9 great songs here!+
PM159 DECIBEL OVERLOAD 5 different tunes!+ Y
PM160 FUSION MATRIX 5 rave type tracks!+ Y
PM161 CYBERNETIX 19 songs packed on 1 disk!+
PM162 MORE MED TUNES Fab tunes by Alex St
PM163 OCTASTUFF Some good 8 track tunes! + Y
PM164 OCTAROCK 3D More 8 track & 3d graphics
PM165/6 NUTCRACKER SUITE Super rendition!+ Y

SLIDESHOWS

PS002 ADVANCE HAM Really stunning !+ Y
PS008 AIRCRAFT SLIDE Pics of fighter aircraft!+Y
PS009 ASTRONOMY SLIDE very impressive !+Y
PS013 BORN TO BE FREE wild animals +Y
PS033 GERMAN RAY TRACE Superb See these !+
PS045 KELLY S/S Some quality HAM pictures.+Y
PS056 NEWTEK DYNAMIC HAM 640x512 4096 co
PS062 NW DYNAMIC HAM Nik Williams Superb qu
PS067 RICK PARK'S ART Dpaint hires pics! + Y
PS072 SUPER HAM CARS This is a must-Mega!+
PS086 SONIC 5 Superb D-HAM 4096 colour pics+
PS090 FRACTALGEN Incredible fractals etc + Y
PS093 VANISH 3D Awesome 3d ray traced +Y
PS094 INVISIBLE WORLD II Yuk Bedbugs And mo
PS101 ANALOGIUE SLIDE Ray traced space pics +
PS102 ACCESS DESIGN Ray traced space pics +
PS103 DYNAMIC HIRES 2, 4 fantastic quality pictu
PS104 VGA PICS Some exellent quality pictures he
PS105 SCAN PICS Exellent quality pictures!+Y
PS106 BAHRAIN SLIDES Pics from the middle east
PS107 ALCATRAZ MUSEUM 18 super quality draw
PS108 SANITY COMP WINNERS 10 Superb draw

MUSIC UTILS

PT001 ALGORYTHMS Create weird midi tunes
PT002 ART OF MED Excellent !+ Y
PT005 CASIO CZ EDITOR 250 patches ! +
PT006 DELUXE MUSIC DATA Midi music+ Y
PT009 K1 IFF SAMPLES Fabulous samples +
PT011 KAWAI K1 editor for patch changes!
PT012 KAWAI K4 editor as above!
PT013 MED 3.2 Excellent music seq. + Y
PT014 MED MUSIC DISK As it says !+ Y
PT015 MIDI DISK Various midi stuff +
PT020 ST-01 - ST-10 Samples--Ring for details
PT021 SOUNDTRACKER 2.6 Excellent, ok plus!+Y
PT022 SOUNDTRACKER COMPILATION Several
PT025/6/7/8 ST-90-93 SAMPLES Studio quality+ Y
PT029 YAMAHA DX7 VOICE FILER for DX7 synths
PT030 YAMAHA DX7 VOICE SORTER for the above
PT031/2/3 ST-87 - 89 3 disks full !+Y
PT034/5 ST-97 & 98 More samples !+Y
PT037 PROTRACKER 2.2 THE LATEST VERSION
PT038 YAMAHA DX100,TX81Z, DX27,DX11 & FB
PT040 OCTAMED V1 8 channel MED sequencer!+
PT041 NOISEPLAYER 4.0 Multitasking module pla
PT042 START IFF SAMPLES Superb ! Get this dis
PT043/5 HOUSE SAMPLES 3 disks full of house sa
PT046 AUDIO MAGIC3 Super trackers disk, ok on

AMOS PD

APD036 AMOS UPATER Latest updater !!! v1.34 + Y
APD115 BALLOONACY Bomb the buildings !+ Y
APD237 SHAPES Excellent kids game !+Y
APD257 CASSETTE LABELLER + MIXED SOURCE
APD271 WIZARDS DOMAIN graphical adventure+Y
APD292 WAR OF THE FOUR graphic adventure ga
APD329 FRUIT MACHINE Good for the gamblers !+
APD347 NOTEBOOK & SHOPPING LIST Easy to u
APD363 FAMILY HISTORY DATABASE Latest vers
APD373 COMPILER 1.34 UPDATE Amos compiler !+

NEW!

PU278 GELIGNITE FONTS IV Yes more Iff fonts!
PU279 V MORPH Yes finally a PD morphing prog!+ Y
PU280 POOLS WIZARD Pools prediction,save disa
PU281 PEGASUS WORKBENCH HACKS silly hack
PU282 ASI MULTIVISION 2 Imagelab,Wasp & more
PG220 MICROMARKET V1.1 Good stock& shares ga
PG221 OXYD Roll marble to different stations! + Y
PG222 3SHOOT UPS Megarace,Spaceattack 1 & 2
PG223 PUMPING DUDE Pump fuel on a space sta
PG224 THE LOST OCCREST Collect the keys game
PG225 CRAVE A 2 Player tank battle game! +Y
PG226 3D GAMES 3 games done in 3d construction
PG227 IMP WALKER 3d walker shoot em up & more
PG228 ASI 42 Galaga, Intuder alert Dogs in space!+
PG229 ASI 43 Interlock Roulette Octothello etc!+
PG230 ASI 44 Nibbler,Mouse Impossible,Roll on etc
PG231 ASI 45 Dtris,Paccheese,B-Castle Teserae etc
PE028 MATHS ADVENTURE Solve questions to pro
PE029 LEXCESS Simple but fun hangman style game
PE030/2 DESKTOP GUIDE TO ELECTRONIC MUSIC
PD181 CINEMORPH Fab morphing of 4 faces! 1mb
PD182 SPACEBALL Absolutely brill,needs 1meg chip
PD183 DIGITAL LETHAL EXIT Good vectors demo!
PD184 ANDROMEDA MINDRIOT Very good vector
PA106/7 THE JOURNEY Fab fractal pics & anims(2)
PA108 DESERT DOO Guy finds ice cream van in de
PA109 SATURN ORBIT Ray traced flight around Sat
PA110/13 THE SORCEROR Sorceror turns into drag
PA114/17 SORCEROR 2 More dragons but 2mg (4)
PA118 3 SCHWARTZ Skydive,Soft landing & bomber
PA119 STEAM ANIMATION V2.0 Now with sound!
PA120 TWO STROKE PETROL ENGINE Super anim
PS111 IMAGINE SLIDE Some great hand drawn art

ORDERING MADE EASY

BY POST: send your Name, Address & Order details with a Cheque / PO / IMO to any of the companies listed
BY PHONE: Call us with your card number and details for a 1st class service. All major cards accepted
PD PRICES: 1 - 5 disks £2.00 per disk • 6 - 25 disks £1.25 per disk • 26 or more disk are still only 99p per disk !
POST & PACKING: UK - 50p • UK 'Recorded Delivery' £1.00 • Europe +25p per disk • Rest of World +50p per disk
REMEMBER: We stock Fish 1-780, Tbag 1-63, Amos, Scope, Snag, Amicus, Amigos & lots more superb PD disks!!

PLEASE NOTE:
All disks on the advert should work on the Amiga 1.2/1.3 dos systems unless otherwise stated! All disks with a "+" sign should work on the Amiga 500+ & 600 machines! However there are so many different setups now in use it is becoming impossible to test for every possible variation, so please use some caution especially with A1500/2000 with various dos systems, CDTV and of course the new Amiga 1200 & 4000 systems. Disks marked with a "Y" should be okay on the A1200 / 4000 though obviously not yet extensively tested. Please take care!

VISA

MasterC

Domain Distributors

not the imitators !

MEMBERS OF THE PROFESSIONAL STANDARDS OF DISTRIBUTION

UK !

Most CLR titles ok on A1200!

.. The Central Licenseware Register ..

Commercial Quality programs at a PD price !

Most CLR titles ok on A1200!



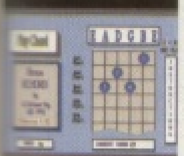
CLE01 TOTAL CONCEPTS DINOSAURS Have your children ever wanted to know about the ancient world of the dinosaur ? If so, then this is for you - an interactive encyclopedia covering jurassic, triassic & createaceous periods complete with pictures and information. This program is plus compatible and comes on 2 Disks. £4.50 +



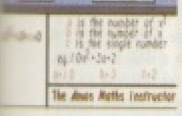
CLE02 TOTAL CONCEPTS GEOLOGY Thit title is the second in the series of quality programs by Chris hill, using the GoldDisk Hyperbook system, it will guide you and your children on an interactive guided tour through the incredible world of volcanos, rocks and minerals. the program is very simple to use ! Geology is on 2 Disks £4.50 +



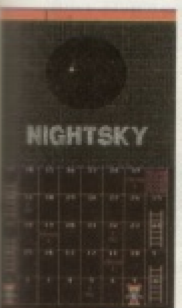
CLE03 TOTAL CONCEPTS SOLAR SYSTEM Now our most popular title ! This one invites you to learn all about the solar system, with information on all of the planets & systems with pictures supplied by Nasa, this is a superb educational package for children & adults. This title is so big it is supplied on Three disks and is priced at only £4.99. +



CLE05 A-CHORD So you want become the next Eric Clapton then this is just what you need ! This program will teach you nearly every single guitar chord including fingering techiniques, it will even *play* the chords using the amigas built in sound chip. A must for every single guitar player beginner and experts alike. Price £3.50 +

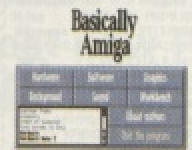


CLE06 THE AMOS MATHS INSTRUCTOR, A superb maths tutorial covering all sorts of mathematical subjects including trig, Quadratic, Simultanious, Inequalities, Volumes, Area, Vat & Interest and more. an excellent aid for GCSE students. Price £3.50 +



CLE08 NIGHT SKY A superb introduction to the constellations, this program features over 1500 stars, and the sun moon stars & planets can be displayed as seen from any part of the Earth! Large scrolling screen, mouse or keyboard controlled, click on any displayed object for information. This superb title Comes on 2 disks & is priced at 4.50!+

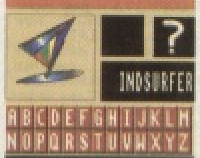
CLE09 WORDS & LADDERS An exellent spelling program for 1 or 2 players, each player has a few seconds to spell a word correctly, the player who reaches the top of the ladder is the winner. The program has 10,000 words so some words can be quite long, however you can select the level! Will also provide printed output to a connected printer, 3.50!+



CLE10 BASICALLY AMIGA This is a 3 disk set for the new user! An extensive guide through the use of Amigados. Covering Hardware, Software, Graphics, Sound, the Workbench, Viruses and much much more,you will soon wonder how you did without this useful utily pack! For young and old users alike. 3 disk set priced at 4.99! +



CLE11 LET'S LEARN V1.1 For children of about 5 to 7 years of age, each part progresses through five levels of difficulty, when a level is satisfactorily completed then a picture of a farmyard is displayed & a new animal introduced! Try Sums, Tunes, Codes, (numbers) , Opposites & Squares! The program also has a print option! 1 disk 3.50. +



CLE13 ALPHABET TEACH A nice educational program for the young., a very simple to understand spelling program which shows the child a picture & asks for the completion of the appropriate word. The program also has built in speech and will run a series of pictures at the same time speaking the name of the object displayed. Comes on1 disk and is priced 3.50+



CLE13 HOME BREW This is a superb program for the creation of home made wines. It covers all the details of fermentation, bottling & storing of the wine. A selection of recipes for many different wines can be found on the disk & there is an option for printing the recipies out to a connected printer! This program comes on 1 disk and is priced at 3.50. +

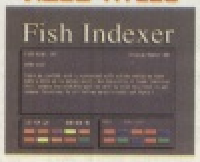


CLE14 TOTAL CONCEPTS ECOLOGY Total Concepts Ecology will give you and your children an enthralling overview of the most important "ology" in our lives. This alternative way of learning about Ecology enables you to flip through pages of text, click onto words to get more information and contains superb graphics. Supplied on 3 disks priced 4.99 +

SMOOTH SCROLLING TITLES

created with VIDEO TITLES

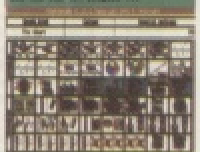
CLU01 VIDEO TITLER is a program that will allow you to create smooth scrolling video titles with the greatest of ease, programmed by Darren Mccaul, whose Starbase is due out soon, the program lets you use any amiga bitmap font, of which several are supplied, and scroll in any colour vertically up the screen. Essential for all video enthusiasts. £3.50 +



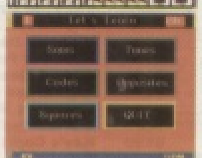
CLU02 FISH INDEXER If you have ever wanted a program, but have never been able to find it ANYWHERE chances are it's probably in the fish library, but rather than having to rake through thousands of lines of text, why not use the Fish indexer, a superb database of the entire Fred Fish library, with full search, print and more.Price £3.50+



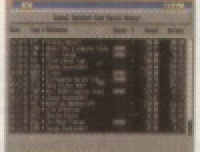
CLU03 TYPING TUTOR A program here now for all you budding office clerks, learning to type can be a real pain, lessons cost a fortune, but not when you have an amiga ! This program will take you step by step through a full typing course, showing where to place your fingers and lots more. Before long you'll be able to type as fast as I can ! Price £3.50 +



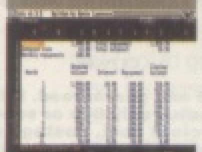
CLU04 ALPHA GRAPH This is an extemely useful program for the production of pie charts, bar charts, Block scatter etc, very useful in conjunction with spreadsheets & other business programs, this program comes on one disk and is priced at 3.50!+



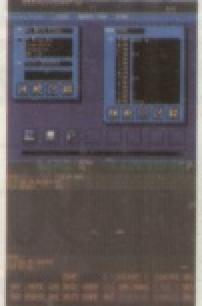
CLU06 SUPER SOUND III This is a superb program which can manipulate samples in almost any way you please, special effects such as reverb, tremelo, phasing, phlanging, echo are just a few of the things which are easily accomplished,the equal of expensive commercial software! Price 3.50!+



CLU10 POWER ACCOUNTS This is an accounting package for keeping check on your bank account, and is capable of generating account statements and income & expenditure reports. The program will also allow you to "password protect" your data files! An invaluable program for all of your finances, comes on 1 disk , price 3.50. +



CLU11 CALC V1.3 A nice spreadsheet program which works on any Amiga! A spreadsheet is an electronic version of the traditional method of performing complex calculations using rows & columns of figures. In the same way a wordprocessor allows rearranging & editing before printing, so a spreadsheet allows figures & calculations to be constantly changed! 3.50. +



CLU12 VIRTUAL WINDOWS V1.0 Collectively a suite of very useful programs, all on one disk! Features Notepad, Address book, Desk diary, Software VHS inventory & an Amigados survival guide.
All can be accessed from a menu system with the mouse & are very easy to use.
Price 3.50. +

CLU13 DATOS A powerful easy to use database with many features: audible tone, keyboard/mouse control, template feature, cut & paste with mouse, help features, rearrange/add fields even after creation, warning messages, can print down or across the page to save paper, many more features too numerous to list. Price 3.50 +

FUNPACK GAMES

...UGE COLLECTION OF PD GAMES ON 30 ...KS, ALL A500+/600 COMPATIBLE - A MUST ... THE KIDS . (MOST OK ON A1200!)

All 30 for Only£29.95 !

ASSASSINS GAMES

...E ULTIMATE COLLECTION OF GAMES FOR ...E AMIGA, ALL THE GAMES IN THIS PACK ...E THE BEST AVAILABLE, NEARLY EVERY ...E YOU CAN THINK OF INCLUDING: ...MAN, INVADERS, GALAXIANS, ASTEROIDS, ...D GAMES, TETRIS, PUZZLE GAMES, WELL ...ER 130 GAMES IN TOTAL - PACKED ONTO ... AMAZING 35 DISKS ! (Smaller packs on ...uest)

All 35 for Only £34.95 !

PHONE FOR A500+A600 COMPATIBILITY

NEW FROM WEIRDSCIENCE!!

5 superb slideshows for the new Amiga 1200 & 4000 systems in Hires AGA 256 colours! Now you have something to showoff your new machine! Not many pictures per disk as they are in Hires with music backing! Fabulous!!

WS AGA1
WS AGA2
WS AGA3
WS AGA4
WS AGA5

ABSOLUTELY
NOT AMIGA 500/600!

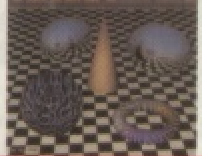
NEW SUPER HAM PICS!

For the 1200/4000 only, these are the ultimate quality pictures for the new machines graphics power!
These disks must be loaded on the worksench and are viewed simply by clicking on the icons. In 262,000 colours they are barely any different t,o the original 24bit images! Show them to your PC owning friends and watch them weep!

Order nos, SH1 - 6.

More Super Ham available soon!!!





JPEG 24 BIT PICTURES

An amazing 9 disks full of brilliant 24 bit pictures by Michel Rigo. Probaby 100 or more pictures altogether, fabulous quality when unpacked. Please remember you need tons of memory & some form of 24 bit display to view ,or convert to Superham! Please ask for JP 1-9.

AMIGA CD ROM COMPACT DISCS

CDPD Features Fish 1-660, hundreds of modules, & much much more! 19.95.

CDTV DEMO DISK Over 600 megabytes of demos, samples, modules, games clipart & much more! Superb! 19.95

CDPD 2 This disk contains Fish 661 -760, Scope 1-220, and loads more! 19.95.

Please add 50p p&p per CD disc!

...RE CLR TITLES ALSO AVAILABLE:

...4 COLOURING PAD Colouring book for young children. 1 disk 3.50 +
...7 FRESHWATER FISHING Learn all about fishing! 2 disks 4.50 +
...5 SAS MENU MAKER Useful for the creation of menus. 1 disk 3.50. +
...7 PHILO A simple to use database system! 1 disk 3.50 +
... WORD FINDER crossword & anagram solver & dictionary! 2 disks 4.50 +
... PLAY & RAVE2 Music module linker, create your own tunes! 2 disks 4.50+
...1 NORRIS A medievil romp across many levels! very addictive 1 disk 3.50 +
...2 DARK THINGS Another scrolly run & jump platform game! 1 disk 3.50 +
...3 PHASE II This is a sideways scrolling shoot em up, 1 disk 3.50 +
...4 X-SYSTEM Multilevel shoot up, blast end of level monsters! 1 disk 3.50 +
...5 TRUCKIN ON A truck driving & management simulation 2 disks 4.50 +
...6 OBLITERATION Fast action shoot em up game. (Not dos2 or 3 !!)
...8 DRAGON TILES Superb version and very addictive ! 1 disk 3.50 +
...9 MOTOR DUEL A great 3d car racing chasing shooting game. 1 disk 3.50+
...0 FUTURE SHOCK Guide the ball through the maze! 1 disk 3.50 +
...1 ALL GUNS BLAZING 2 player car game, overhead view. 1 disk 3.50 +
...2 BULLDOZER BOB Clear screen of coloured blocks! 1 disk 3.50 +
...3 PARADOX Another good puzzle game! 1 disk 3.50 +
...4 SONIC SMARTIEHEAD Platform game for 8 years & over 1 disk 3.50 +
...5 SPLODGE THE REVENGE Good puzzle solving platformer 1 disk 3.50+
...7 IMBRIUM DAY OF RECKONING Exellent graphic adventure! 1 disk 3.50+

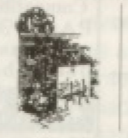
CLASSIC CLIPART

(Okay on A1200 / A4000.)

The clipart in this collection is very high quality, huge bitmaps, many greater than an Amiga hires screen, for use in Dpaint or DTP packages, each disk autoboots as a slideshow allowing you to view the entire bitmap by moving the mouse! (Prices per disk!)

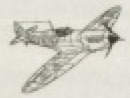
ART01 WEDDINGS Superb wedding clipart, 2 disks!+
ART02 HOUSES 2 disks, pictures of mansions etc!+
ART03 RELIGIOUS 3 disks full of holy clipart!+
ART04 WWI AIRCRAFT 1 disk of World war II planes!+
ART05 MEN 2 disks full of men at work!+
ART06 WOMEN 2 disks full of women clips!+
ART07 KIDS 2 disks containing kids clipart!+
ART08 BUSINESS Disk full of office clipart!+
ART09 OFFICE Another office type disk!+
ART10 STUDENTS Lots of student type pics!+
ART11 SALETIME Many useful logos etc!+
ART12 XMAS 3 disks of Xmas related pics!+
ART13 PUNCH 3 disks of cartoon pics! +
ART14 ANIMALS Fantastic quality pictures!+
ART15 CATS Only 12 pics but super quality!+
ART16 SILHOUETTES 18 super silhouettes!+
ART17 SCHOOLS 2 disks of school pictures!+
ART18 BABIES Clipart on a baby theme!+
ART19 SPORT 2 disks full of sport pictures!+
ART20 OLYMPIC Another sport type disk!+
ART21 MEDICAL 2 disks full of medical clipart!+
ART22 SEALIFE Pictures from the Ocean!+
ART23 DECORATIVE MONTHS Pic for every month!+
ART24 WACKY Funny comic type clipart!+
ART25 HOLIDAYS Holiday type pictures!+
ART26 BANNERS 2 disks full of banners!+

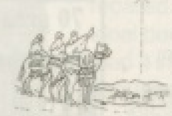
















ART27 ART NOUVEAU FLOWERS Floral art!+
ART28 BUTTERFLIES Nice pictures!+
ART29 FOOD 2 disks on a food/kitchen theme!+
ART30 COLOURING BOOK Colour in Dpaint!+
ART31 BORDERS 2 disks, must load into DTP!+
ART32 MAC CLIP 2 disks high quality macart!+
ART33 HORNBACK Nice scenic clipart!+
ART34 TEDDY BEARS 2 disks of Teddy bears!+
ART35 VANITY FARE 2 disks fashion clipart!+
ART36 HALLOWEEN CLIPART Wierd clipart!+
ART37 SHOWTIME Dancing, singing etc!+
ART38 VEGGIES Vegetarian clipart!+
ART39 FLORAL 14 very detailed pictures!+
ART40 MYTHS Mythical images + zodiac!+
ART41 DOG WOODCUTS Super 300dpi pics!+
ART42 CAT WOODCUTS Great wildcat pics!+
ART43 AFRICAN WOODCUTS African animals!+
ART44 AMERICAN WOODCUTS More animals!+
ART45 ARTIC WOODCUTS Northern animals!+
ART46 FARM WOODCUTS Farm animals!+
ART47 MIXED ANIMAL WOODCUTS Nice pics!+
ART48 BIRDS WOODCUTS 18th century bird pics!+
ART49 MORE ANIMALS More superb pictures!+
ART50 ANIMAL LINEART Varied selection of pics!+
ART51 BOTANICAL ART Very detailed plant pics!+
ART52 FAMILY SCENES 2 disks of domestic life!+
ART53 GOLF HUMOUR 2 amusing cartoon disks!+
ART54 SPACE & TRANSPORT On a space theme!+
ART55 SOFTSCENE2 29 rural scenery pictures!+
ART56 SPORTS3 More pics on a sports theme!+
ART57 NAVY Lots of naval type pictures!+
ART58 TRAVEL 2 disks on a travel theme!+
ART59 ALPHABET Borders & alphabet clips!+
ART60 ACCENTS & FLASHES Burst stars & more!+

HOWS

UTILS

PD

VISA

MasterCar...

PROGRAMMERS : Have you written a good program, ie a utility, educational program or a game? Why not send it in for evaluation? If its really good, then you too could be earning money!!!

NBS
CU03 1 CHAIN LANE NEWPORT
I.W. PO30 5QA
TEL: 0983 529 594
FAX:0983 821 599

VALLY PD
CU03 PO BOX 15, PETERLEE
CO. DURHAM SR8 1NZ
TEL:091 587 1195
FAX:091 587 1195

BLITTERCHIPS
CU03 CLIFFE HOUSE, PRIMROSE
STREET , KEIGHLEY, BD21 4NB.
TEL: 0535 667 469
FAX: 0535 667 469

PD UTILITIES

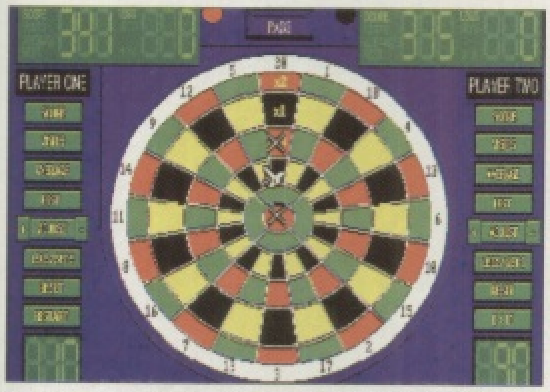
Mat Broomfield dusts the cobwebs from his keyboard and gets down to reviewing some of the brightest new Public Domain Utilities to grace the scene.

THE DART MACHINE

UTILITY

I don't know about you, but whenever a group of my friends get together to play darts, the scorer is always the one who lost the toss. Not only is it a real drag having to deduct all my 180s [*What a fibber – Ed.*] but it can be a really hazardous job to be standing forward of the throwing line.

Anyway, no longer do you have to ruin a perfectly good game of darts by having to exercise your brain



as well. Now you can let the computer take care of the scores. What's more, the computer, being the tricky old number cruncher it is, can also give you a whole bunch of flash statistics about your play. A stylised board dominates the display. Click on the appropriate part of the board and the score is deducted from the current player's score.

The scores are displayed on either side of the board, and the starting figure is user-definable from 101 up to 901. You can also specify the number of legs and sets to be played. Once play has commenced, you can find out at any time 'crucial' facts, such as the number of visits a player has made to the ockey, or his average or best scores.

For most of us, it's hardly worth turning the computer on just to score a game of darts, but for serious players, this program can provide a range of statistics which allow them to monitor their performance closely. A very nicely produced program indeed.

Disk No: 2371. From: 17 Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire, WF1 1DH. Tel: 0924 366982. Price: £1.50 Inc P&P. Compatibility: Any Amiga (A1200 & 4000 not tested).Memory: 512K.

71%

WORLD GEOGRAPHY

EDUCATION

Relatively speaking, we live on a tiny speck of dust floating on a minute ocean on an utterly insignificant planet in a lesser solar system. Given our extremely limited amount of living space, why then, do we know so little about the planet we call home? Nah, I don't have a clue either, but it makes you wonder, doesn't it?!

Anyway, you can reduce your ignorance thanks to a duo of programs which have been lovingly created on AMOS by Tony Kingsmill. The first of these programs is called World Geography and it's a pseudo hyper-media wander around the physical world, starting with the planets, and zooming down to the major landscape features of Britain. Controls within the presentation are strictly limited; F1 to show the previous picture, F3 to show the next picture and F2 to show the text accompanying a screen. The graphics (which consists mostly of maps) usually contain annotated landscape features such as rivers or contour blocks.

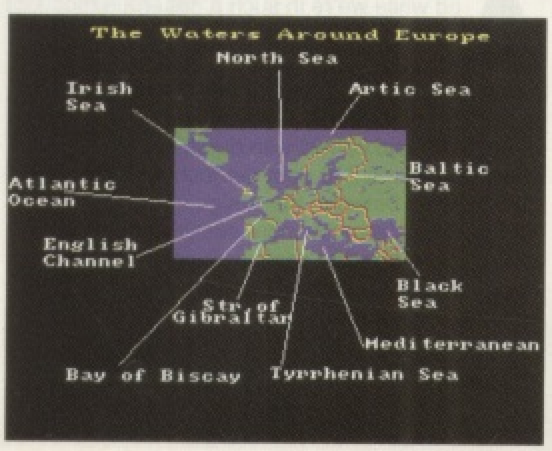
The information given is not terrifically detailed, and doesn't even follow any particularly logical order that I could recognise, but for some reason I found the program strangely endearing, and I'm sure that it would be ideal for use by top juniors or lower secondary students.

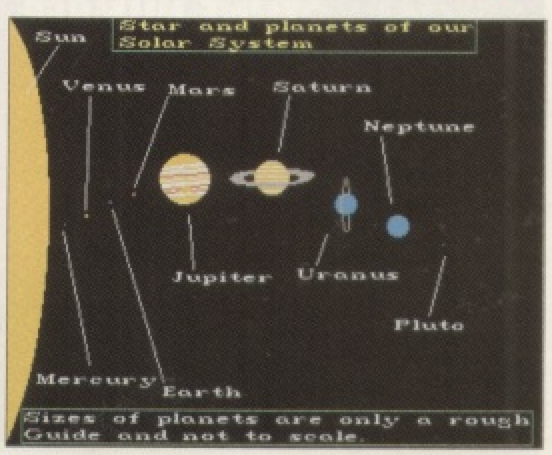
The other program on the disk is called Geo Base and is perhaps aimed at a more mature audience. Quite simply, it's a database of the countries of the world, giving such information as their primary religions, land area, main languages, capital city, etc. Unfortunately, so few countries are included, that this program is only of strictly limited use, even to children. I also felt that it could be a bit more thorough in the type of information it gives. I would have thought that the currency, world time zone, primary industries and population would have been essential additions.

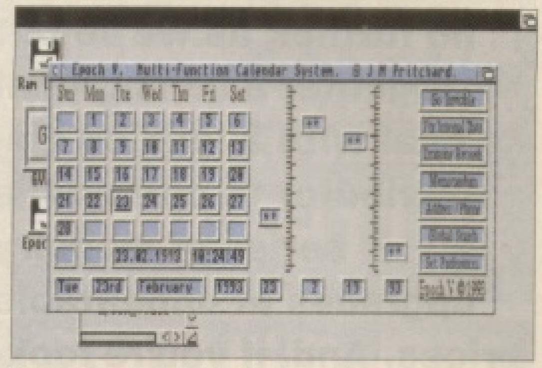
All in all, I recommend this disk for kids, but I doubt if adults or older students will find it much use!

Disk No: 2373. From: 17 Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire, WF1 1DH. Tel: 0924 366982. Price: £1.50 (including P&P). Compatibility: Any Amiga (A1200 & 4000 not tested). Memory: 512K.

78%







EPOCH V

ORGANISER

In principle, I always liked the idea of computerised organisers and address books. The sad practical reality of the situation is that I never felt it was worth the effort of loading a database for a phone number that I could get from my diary in a fraction of the time. Likewise for the organiser. Perhaps that feeling was heightened by the fact that I never really encountered a program that was good enough to use. Now, thanks to *Epoch V*, I may very well have to reconsider my position...

The program is basically an integrated diary, memo pad and address book. When you first load it, your customised calendar file is also loaded and any important events within the next seven days are brought to your attentions. Events may be prioritised from 0-99, the higher the number, the more important the event. When an event is brought to your attention, the program automatically searches the address file for any related addresses, and offers you the opportunity to see further information.

Once you've dealt with any flagged events, you will find yourself back at the main screen. This basically consists of a 31 day calendar and a row of option buttons which are used to select the program's various editing functions.

If you double click on one of the dates on the calendar, a new window called (somewhat pretentiously) the 'Editing Suite' will appear. This is simply where you can specify any information about events that will occur on the specified date, as well as assigning a location to them. Although you can enter everything manually, most entries can also be made solely with the mouse, and additional area maps are available to overseas registered users.

The address book section of the program is really quite elegant, and very easy to use, although it doesn't yet have proper printer support. The entire program can be made memory resident, being recalled at the press of a couple of hot-keys. This is ideal because it means that hard drive users can load it in the background as part of their start-up sequence.

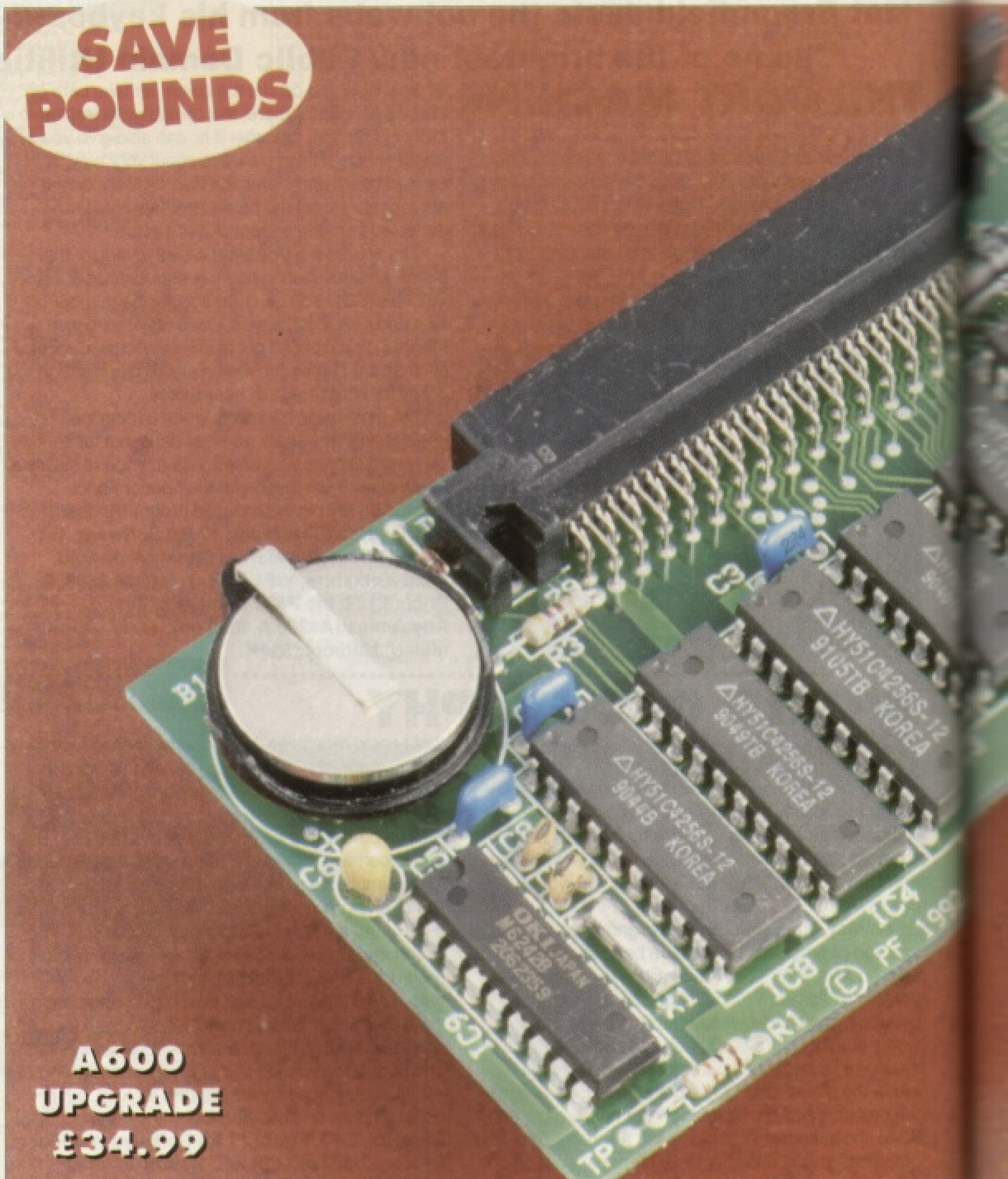
Although *Epoch V* is a complete program in its own right, its author clearly states that it is merely a taster of the licenced version, and what a promising taster it is too!

Disk No: EpochV. From: NBS, 1 Chain Lane, Newport, Isle of Wight, PO30 5QA. Tel:0983 529594. Price: £4.25 for two disks. Compatibility:Any Amiga (A1200 & 4000 not tested). Memory:512k.

84%

MEMORY UPG

Want to boost the power of your Amiga? Then look no further, as we've put together a sensational deal with a leading distributor to offer you a series of memory upgrades at unbeatable prices. And, if you're looking to upgrade your mouse, check out our own replacement mouse at a super low price.



BOOST YOUR MEMORY!

Unleash the hidden power of your machine with a memory upgrade. With more and more applications requiring a minimum of 1Mb of RAM, can you afford NOT to upgrade your machine's memory? Just take a look at the prices below, and then decide!

We've negotiated a series of cut-price deals on a range of top quality memory upgrades to ensure you get the best possible value for your money. For A500 owners there's a 512K expansion board to boost your machine up to the magic Megabyte. A500+ owners can get their hands on a $^{1}/_{2}$Mb upgrade to expand their machine to $1^{1}/_{2}$Mb, or opt for a 1Mb board to give them a 2Mb wonder machine. For the A600, there's a 1Mb RAM upgrade complete with clock, so you'll be able to catalogue your files by date. All the boards are populated and are fitted via the tradpdoor, so you won't invalidate your warranty. If that's not enough they even come with a full 12 months' guarantee.

So what's it going to cost? Not as much as you might think! Take a look at these prices...

- A500 upgrade costs only £14.50
- The 1/2Mb A500+ upgrade works out at only £17.99
- The 1Mb A500+ board costs a miniscule £22.99
- A600 upgrade costs just £34.99

The best thing about the offer is that all of the above prices INCLUDE POSTAGE AND PACKING! So what are you waiting for? For less than the cost of a full-price game you can transform your Amiga into a super machine. Don't delay, fill in the form opposite NOW!!

IMPORTANT!

SPECIAL HOTLINE NUMBER 0480 891171

If you don't receive your goods within the allotted 28 days, then something's gone terribly wrong. Obviously we value your custom, so we've set up a special HOTLINE number to help sort out any problems or to answer any queries you might have.

Please ring 0480 891171 for all your enquiries. Don't ring the CU Amiga offices as we'll only pass you on to this number and you'll have wasted a phone call.

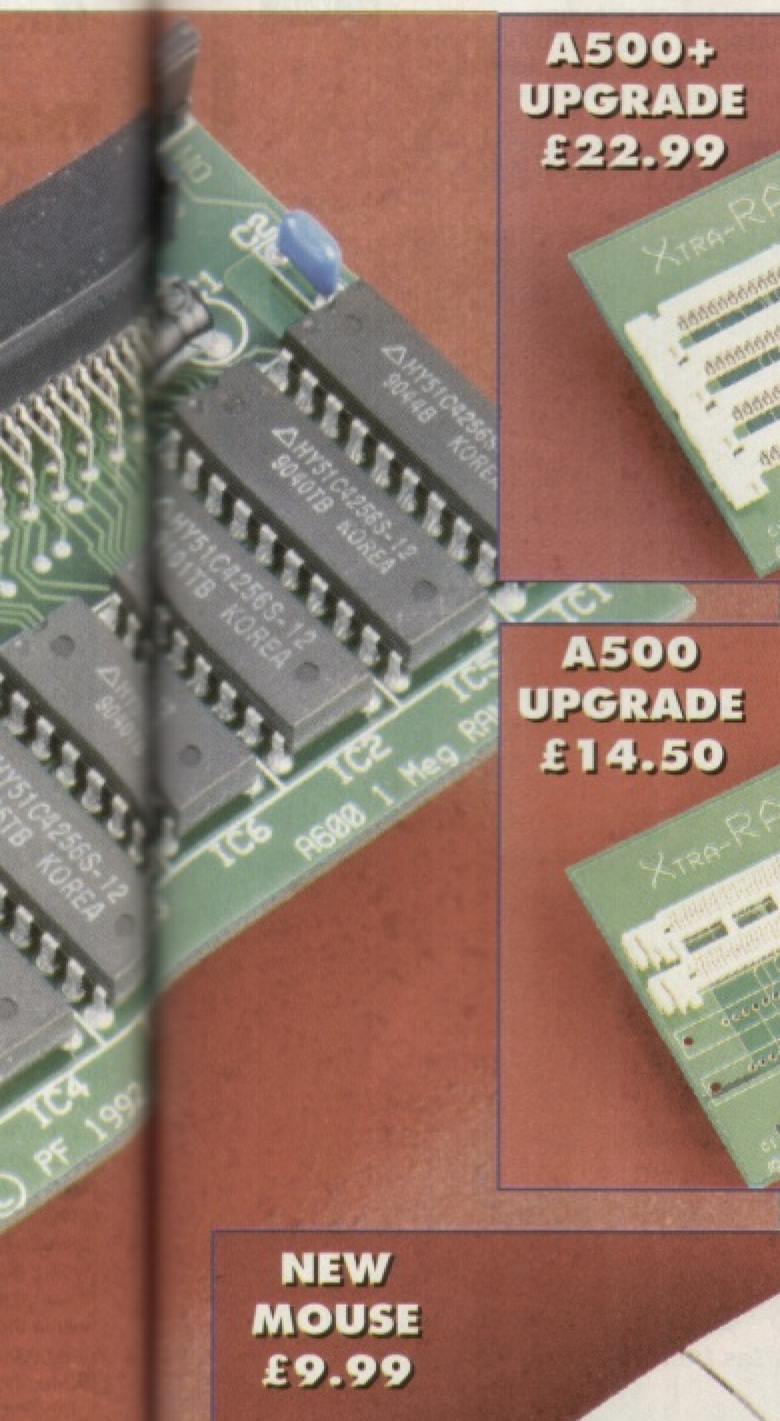
Sorry but this offer is only open to UK residents.

Fulfillment by: Go Direct, 7 Vinegar Hill, Alconbury Weston, Huntingdon, Cambs, PE17 5JA.

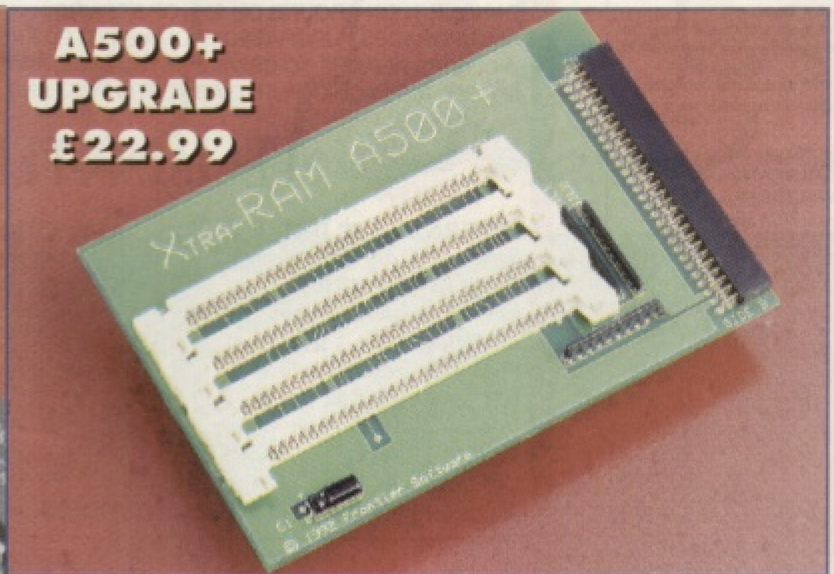
MOUSE OFFER

And while we're in such a generous mood, here's your chance to upgrade your mouse. If your mouse is feeling the strain, isn't it about time you retired it to the local stud farm? This high-quality replacement mouse costs a mere £9.99 and comes with durable microswitches, a 280 dots-per-inch resolution and is switchable between the Amiga and ST. The CU Amiga mouse is much more sensitive than the Commodore one that came with your original machine, so an immediate bonus is its increased accuracy and control. The microswitches also mean it's easier to click and double click than ever before. Even the most robust mouse can turn up its wheels and stop working, so here's the ideal low-cost replacement. Send for yours today!

GRADE OFFERS!



A500+ UPGRADE £22.99



A500 UPGRADE £14.50



NEW MOUSE £9.99



ER

mood,
r
e strain,
stud
e costs a

ion and
The CU
the
nal
reased
lso
han ever
urn up
ideal
y!

ORDER BY TELEPHONE

VISA AND MASTERCARD TELEPHONE ORDERS

0480 891171

ORDER BY POST

PAYING BY CHEQUE AND POSTAL ORDERS

If you pay by cheque or Postal Order, make all orders payable to GO DIRECT and mark cheques with your cheque guarantee number on the reverse.

All prices quoted are inclusive of VAT and include free after-sales technical helpline on all memory upgrades.

Please allow up to 28 days for delivery. Send your completed forms to: CU AMIGA READER OFFERS, 30-32 FARRINGDON LANE, LONDON, EC1R 3AU.

- [ ] A500 1Mb upgrade........................£14.50
- [ ] A500+ 1/2Mb upgrade.................. £17.99
- [ ] A500+ 1Mb upgrade..................... £22.99
- [ ] A600 1Mb upgrade with clock......£34.99
- [ ] New Mouse.......................................£9.99

Total..£

Method of payment:

- [ ] Cheque
- [ ] Postal Order
- [ ] Visa/Mastercard

Name ....

Address ....

....

....

Postcode...

Telephone (day)..

Visa/Mastercard...

Expiry Date..

Signature...

DIGITALLY MASTERED SAMPLES

IFF SOUND SAMPLE LIBRARIES

Each disk is compiled from a **studio quality master** and is sampled on the Amiga at **twice the sample rate** of P.D. sample disks. They are compatible with all P.D. and commercial tracker and sequencer programs. N.B. no. of samples in brackets.

001 **AFRICAN**	: Talking drums, Marimbas, chants etc. (53)
002 **INDIAN INST**	: Sitars, Bansuri, Chants etc. (19)
003 **INDIAN PERC**	: Tablas, Bayas, Rhythm Loops etc. (35)
004 **ARABIC**	: Ud, Saz, Bendir, Rhythm Loops etc. (37)
005 **FAR EAST**	: Tibetan Bells, Yangqin, Koto etc. (31)
006 **EUROPEAN**	: Balalaika, Choirs, Bodhran etc. (34)
007 **OCEANIA**	: Didjeridu, Chants, Slit Drum etc. (23)
008 **AMERICAS**	: Kena, Berimbau, PanPipes etc. (30)
009 **FX PERC.**	: Power Toms, Snares & Bass, Scratch & Rap. (88)
010 **DRUM KIT**	: Bass&Snares, Hi-Hats, Cymbals&Toms (63)
011 **ANALOG PERC.**	: TR-808, CR-78, Loops etc. (64)
012 **LATIN PERC.**	: Timbales, Congas, Cabasas, Cowbells etc. (107)
013 **GUITARS**	: Acoustic, Electric & Distorted etc. (41)
014 **BASS GUITARS**	: Slap, picked, fretless, FX, etc. (44)
015 **ANALOG BASS**	: Oberheim, Roland, Korg, etc. (22)
016 **DIGITAL BASS**	: Yamaha DX, Roland, Korg, etc. (28)
017 **BRASS**	: Sections, Saxes, Trumpets, etc. (24)
018 **SYNTH BRASS**	: Analog, Digital &L.A, etc. (18)
019 **PIANOS**	: Octave Splits, with strings, FX (16)
020 **STRINGS**	: Cello, Orch. Hits, Sections, etc. (21)
021 **SYNTH STRINGS**	: Analog & Digital (19)
022 **CHOIRS**	: Mixed choirs, with bells & synth (16)
023 **ORGANS**	: Church & Electric (17)
024 **BELLS**	: Real & Synth, with Choir & Strings (20)
025 **SOUND FX**	: Action Sounds, Explosions, Gunshots, etc. (30)

Each Disk is priced at £2.50, any 10 for £19.95, the Complete Collection for £49.95. In addition, Sampler owners can use our **Digitally Mastered** Chrome, Metal, or DAT **sample Cassettes** which contain most of the above samples: COO1 **WORLD MUSIC COLLECTION** (175)
C002 **PERCUSSION COLLECTION** (228)
COO3 **GUITARS AND BASSES** (161)
Each Chrome: £9.95, Metal: £11.95, DAT: £16.95.
The Three collection Package is priced at:
£21.95 (Chrome), £25.95 (Metal), £38.95 (DAT)

P&P £1 (any order) Cheques & P.O.s to :
WALKABOUT MUSIC (Dept. CU)
TRENOVISSICK FARM, THE MOUNT, PAR,
CORNWALL PL24 2DA
Tel: (0726) 813807

LOWEST PRICED TOP QUALITY RIBBONS

	1 off	2+	5+
Amstrad DMP 2000/3000	2.80	2.65	2.45
Amstrad DMP 4000	3.66	3.51	3.31
Citizen 120D/LSP10/ Swift 24/9	2.85	2.70	2.50
Citizen Swift 24 Colour	12.81	12.66	12.46
Commodore MPS 1220/1230	4.50	4.35	4.15
Epson LQ400/500/800/850	3.45	3.30	3.10
Epson FX/MX/RX80/FX/LX800	2.90	2.75	2.55
Epson FX/MX/RX100/FX/MX1000	3.36	3.21	3.01
Epson LX80/86/90	2.12	1.97	1.77
NEC Pinwriter P2200	3.03	2.88	2.68
Panasonic KXP1123/1124/1140	3.46	3.31	3.11
Panasonic KXP1080/1180/90/1592	2.89	2.74	2.54

	1 off	2+	5+
Star LC10/20 Black	2.29	2.14	1.94
Star LC10/20 Colour	6.00	5.85	5.65
Star LC200 Black	3.00	2.85	2.65
Star LC200 Colour	9.78	9.63	9.43
Star LC24-10/200 Black	2.86	2.71	2.51
Star LC24-10/200 Colour	9.63	9.48	9.28

Canon BJ-10 Inkjet Cartridge	Original 17.54 each		
HP Deskjet Cart. (Double Cap)	Original 21.79 each		
Canon BJ-10 Refill (Twin Pack)	11.00	10.60	9.95
HP Deskjet Refill (Twin Pack)	11.00	10.60	9.95

Ring for ribbons, inkjet cartridges and inkjet refills not listed

Ring us and we will beat all other prices

0543 250377 Ring us or send cheques to: **0543 250377**
Owl Associates, Dept 56, Owl House,
5 The Brambles, Lichfield, Staffs WS14 9SE
ALL PRICES INCLUDE VAT & DELIVERY
E & OE

AMIGA REPAIRS

FIXED CHARGE ONLY £42.99 Incl.

Est. 11 Years

FIXED CHARGE INCLUDES PARTS, LABOUR, DELIVERY, VAT
90 DAY WARRANTY ON ALL REPAIRS
24 HOUR TURN-AROUND ON 95% OF REPAIRS
ALL UPGRADES PURCHASED FROM US FITTED FREE WITH REPAIR
INCLUDES REPAIRS TO DRIVE & KEYBOARDS, ADD £10.00
IF NEED REPLACING, FULL DIAGNOSTIC TEST AND SERVICE

In Stock

SPECIAL OFFERS

New Low Price

INTERNAL 3.5" DRIVE *Simple to fit, fully documented*	£38.99
ROM SWITCHER *Keyboard/mouse switched*	£14.95
KICKSTART 1.3 ROM *For software compatibility*	£25.00
KICKSTART 2.04 ROM *Upgrade to A500+ Rom*	£29.90
SUPER DENISE *Excellent value*	£29.90
68000 CPU	£15.00
A500 KEYBOARDS *Factory new, Genuine part*	£49.00
FATTER AGNUS 8372A *1 Meg chipram compatible*	£36.50
CIA IC *Printer, Serial, Drive ports*	£10.93
GARY IC	£11.50
PAULA IC	£19.95
DENISE	£19.95

⚠ ATTENTION ALL DEALERS ⚠
Our company now offer the most competitive dealer repair service.
Full credit facilities available
Send for our Free information pack today...

We reserve the right to refuse repair for whatever reasons
Prices only valid with this coupon
Service HOTLINE (0533) 470059
DART Computer Services
105 London Road
LEICESTER LE2 0PF

DART *Computer Services*

DISK STORAGE BOXES

3.5inch 10 capacity (qty 5)	£4.50
3.5inch 50 capacity. Lockable	£3.70
3.5inch 100 capacity. Lockable	£4.70
3.5inch 200 capacity. Stackable	£11.99
3.5inch 250 capacity. Stackable	£18.00
5.25inch 60 capacity. Lockable	£3.70
5.25inch 100 capacity. Lockable	£4.70

ACCESSORIES

Parallel Printer Cable 1.8 mtr	£4.90
IBM/Atari/Amiga Mice	£11.99
2:1 Auto Data switches	£19.99
2:1 Manual Data switches	£16.99
4:1 Manual Data switches	£19.99
Crossover switch 2 to 2	£22.99

PRICES ONLY IF BOUGHT WITH DISKETTES

3 1/2" DISKS

Type	Qty 25	50	100
BenchMark DS/DD	£18.60	£32.20	£47.35
Unbranded DS/DD	£13.40	£22.20	£41.35
BenchMark DS/HD	£34.80	£63.35	£71.70
Unbranded DS/HD	£26.20	£38.35	£63.70
Pre-formated Disks:			
BenchMark DS/HD	£36.25	£66.50	£78.00
Unbranded DS/HD	£27.75	£41.50	£70.00

All 3.5 inch diskettes include labels

5 1/4" DISKS

Type	Qty 25	50	100
BenchMark DS/DD	£11.00	£18.00	£28.00
Unbranded DS/DD	£9.50	£16.00	£24.00
BenchMark DS/HD	£18.00	£31.50	£52.50
Unbranded DS/HD	£14.00	£27.00	£48.00

All 5.25 inch diskettes include envelopes & label set

ALL PRICES INCLUDE VAT & DELIVERY (UK ORDERS ONLY)

24 HOUR ORDERLINE 0597 851784

MCS

Cheques and Postal Orders to:
MANOR COURT SUPPLIES LTD
Telephone: 0597 851792 Fax No: 0597 851416
Dept CU04 151 Glen Celyn House Penybont,
Llandrindod Wells, Powys, LD1 5SY

EDUCATION AND GOVERNMENT ORDERS WELCOME

Northern COMPUTER Markets

50p OFF

ADULT ADMISSION WITH THIS VOUCHER

1993 DATES

3rd	Apr	Manchester (Bowlers Exhibition Centre)
4th	Apr	Coventry (Novotel Hotel)
17th	Apr	Sheffield (Novotel Hotel)
18th	Apr	Oldham (Periquito Hotel)
1st	May	Manchester (Bowlers Exhibition Centre)
2nd	May	Preston (Novotel Hotel)
15th	May	Liverpool (Everton Park Sports Centre)
16th	May	Derby (Periquito Hotel)

ALL SHOWS 10AM TO 3PM
Normal Adult Admission £1.50
WITH THIS VOUCHER £1.00

COME & VISIT THE BEST SHOWS WITH THE LOWEST PRICES

STALL SALES
061 681 0569

AMIGA Workshop

ISSUE 5

APRIL 1993



Amiga Workshop is here to help you get the most from your Amiga. It's packed to the spine with tutorials, step-by-step guides, questions and, more importantly, answers. For the very best in Amiga info, look no further than these very pages.

SOUND CHECK · BOOK SHELF · CLUB CALL · READER REVIEW

Premier Mail Order

*Titles marked * are not yet available and will be sent on day of release.*
Please send cheque/PO/Access/Visa No. and expiry date to:

Dept CU04, 10 Tinkler Side, Basildon, Essex SS14 1LE

Please state make and model of computer when ordering. P&P inc. UK on orders over £5.00. Less than £5.00 and Europe add £1.00 per item. Elsewhere please add £3.00 per item for Airmail.
Telephone orders: Mon-Fri 9am-7pm. Saturday & Sunday 10am-4pm. Tel orders: **0268 271172** *Fax orders: 0268 271173.*
Next day service availablle add £2.50. Check to see if games are 1 Meg Capacity.

4D Sports Boxing	9.99
4D Sports Drivin	9.99
3D Construction Kit 2	32.99
A320 AirBus (USA)	22.99
A320 Approach Trainer*	22.99
Abandoned Places	19.99
Addams Family	16.99
Airbus A320 (EUROPE)	**22.99**
Alien 3	19.99
Alien Breed Special Edition	10.99
Altered Beast	6.99
Ambermoon*	20.99
Amberstar	19.99
Amos The Creator	29.99
Amos 3D	24.99
Amos Compiler	19.99
Amos Professional	44.99
Another World	19.99
Aquatic Games	16.99
Award Winners	16.99
Archer Macleans Pool	16.99
Arsenal FC *	16.99
Ashes of Empire	22.99
Assassin	16.99
A - Train*	22.99
AV8B Harrier Assault	22.99
B17 Flying Fortress (1 Meg) *	22.99
Batman the Movie	6.99
Bat 2 (1 Meg)	26.99
Battletoads *	19.99
B.C. Kid	17.99
Big Box 2	19.99
Birds of Prey (1 Meg)	22.99
Blues Brothers	8.99
Board Genuis	19.99
Body Blows	18.99
Caesar	19.99
California Games	6.99
Campaign	**22.99**
Capcom Collection	19.99
Captive 2*	20.99
Celtic Legends	20.99
Championship Manager (1 Meg)	16.99
Chaos Engine	16.99
Chuck Rock 2 *	16.99
Civilisation (1 Meg)	**22.99**
Cool World	17.99
Combat Classics	19.99
Conan The Cimmerian *	19.99
Covert Action (1 Meg)	22.99
Crazy Cars 3	16.99
Curse of Enchatia	22.99
Daley Thompson Challenge	6.99
Dark Seed	20.99
Dark Sun: Shattered Lands *	21.99
Dark Queen of Krynn	22.99
Deluxe Paint 4	54.99
Deluxe Paint 4 AGA	64.99
Desert Strike*	19.99
Dizzy Collection	16.99
Dizzy's Excellent Adventures	16.99
Double Dragon 2	8.99
Double Dragon 3	16.99
Dragon Lair 3	22.99
Dreadnought	22.99
Dream Team	17.99
Dune See The Greatest	19.99
Dune 2	20.99
Dungeon Master Chaos	19.99
Dynablaster	**19.99**
Easy Amos	29.99
Elvira 2 (1 Meg)	24.99
Elite 2* (Frontier)	22.99
Epic	19.99
Eye of the Beholder (1 Meg)	19.99
Eye Of The Beholder 2 (1 Meg)	21.99
Eye of the Storm *	19.99
F15 Strike Eagle 2 (1 Meg)	(see Combat Classic)
F16 Combat Pilot	8.99
F19 Stealth Fighter	19.99
Fantastic Worlds	22.99
Falcon 3 *	24.99
Final Fight	(see Combat Classic)
Fire Force	16.99
Fire and Ice	16.99
First Samurai + Mega-Lo-Mania	19.99
Flash Back	26.99
Flight of the Intruder	8.99
Football Crazy	16.99

Football Director 2 (1 Meg)	16.99
Footballer of the Year 2	£5.99
Formula One Grand Prix	**22.99**
Ghostbusters 2	6.99
Ghouls and Ghosts	6.99
Gobliiins 2	19.99
Gods	16.99
Golden Axe	8.99
Graham Gooch *	19.99
Graham Taylor	16.99
Grusome *	16.99
Gunship 2000 * (1 Meg)	22.99
Guy Spy	19.99
Harrier Jump Jet *	22.99
Harlequin	**16.99**
Harpoon + Battleset	22.99
Harpoon Battleset 3	9.99
Harpoon Battleset 4	9.99
Harpoon Scenario Editor	13.99
Head Over Heels	6.99
Heimdall (1 Meg)	19.99
History Line 1914-18	22.99
Hook	16.99
Humans	19.99
Ian Botham	19.99
IK+	6.99
Indy Jones - Atlantis Action	19.99
Indy Jones - Atlantis Adv (1 Meg)	24.99
Indy Jones Crusade Adventure	19.99
Int 3D Tennis	£5.99
Int Sports Challenge	19.99
Ishar	19.99
Jack Nicklaus Golf	7.99
Jack Nicklaus Unlimited Golf (1 Meg)	12.99
Jack Nicklaus Extra Courses	10.99
Jahangir Khan World Champ Squash	£5.99
Jaguar XJ220 (1 Meg)	16.99
Jimmy Whites Snooker	See the Greatest
John Madden	16.99
KGB*	20.99
Keys of Maramon *	16.99
Knightmare	19.99
Knights of the Sky (1 Meg)	**22.99**
Laser Squad 2 *	16.99
Lethal Weapon 3	16.99
Leather Goddess	7.99
Leeds United	17.99
Legend	21.99
Legends of Valour	24.99
Legend of Kyrandia	23.99
Lemmings	14.99
Lemmings 2	17.99
Lemmings Double Pack	19.99
Links	24.99
Links Extra Courses	13.99
LionHeart*	18.99
Lombard Rally	6.99
Lost Treasure of Infocom	32.99
Lure of the Temptress	See The Greatest
M1 Tank Platoon	19.99
Macdonalds Land*	17.99
Magic Pockets	16.99
Magic Worlds	17.99
Man Utd. Europe	16.99
Mega Fortress (1 Meg)	12.99
Mega Traveller 1 (1Meg)	19.99
Mega Traveller 2 (1 Meg)	19.99
Microprose Golf	14.99
Microprose Soccer	6.99
Midnight Resistance	6.99
Midwinter 2 (1 Meg)	22.99
Moonstone (1 Meg)	19.99
Narco Police	5.99
New Zealand Story	6.99
Nick Faldos Golf	22.99
Nigel Mansell World Champ	19.99
Nigel Mansell World Champ (A1200)*	19.99
No Second Prize	17.99
Operation Thunderbolt	6.99
Operation Wolf	6.99
Pang	6.99
Paperboy 2	9.99
Parasol Stars	16.99
PGA Golf Courses	9.99
PGA Tour Golf+	19.99
Pinball Fantasies	**19.99**
Pinball Dreams	**16.99**
Pinball Magic	6.99
Player Manager	12.99

Pools of Darkness (1 Meg)	21.99
Populous	8.99
Populous 2+	22.99
Populous Challenge Disk	10.99
Powermonger	19.99
Powermonger Data Disk 1	9.99
Premiere (1 Meg)	**19.99**
Premier Manager	17.99
Pro Tennis Tour 2	16.99
R-Type	6.99
Railroad Tycoon (1 Meg)	22.99
Rainbow Collection	13.99
Rainbow Islands	6.99
Rambo 3	6.99
Rampart	16.99
Raving Mad	17.99
RBI 2 Baseball	6.99
Reach for the Skies *	22.99
Realms (1 Meg)	19.99
Risky Woods	16.99
Road Rash	19.99
Robocod	see Raving Mad
Robocop	8.99
Robocop 3	16.99
Robo Sport	19.99
Rome AD 92	16.99
Sabre Team	19.99
Scrabble*	20.99
Sea Air Rescue*	22.99
Second Surami *	16.99
Secret of Monkey Island (1 Meg)	16.99
Secret Monkey Island 2	**24.99**
Sensible Soccer 1.1	16.99
Shadow Lands	**19.99**
Shadow of Beast 3	19.99
Shadow Warriors	6.99
Shadow Worlds	17.99
Shoot Em Up Con Kit	8.99
Shuttle	**19.99**
Silent Service 2 (1 Meg)	22.99
Silkworm	8.99
Silly Putty	16.99
Sim City+Populous	19.99
Sim Earth	22.99
Simpsons	(see Dream Team)
Smash TV	6.99
Soccer Stars	16.99
Special Forces	22.99
Strategy Masters	20.99
Street Fighter 2	**19.99**
Striker (1 Meg)	16.99
Strip Poker 2 + Data	6.99
SuperCars	6.99
SuperCars 2	8.99
Super Fighters	17.99
Super Hang On	6.99
Super Tetris	16.99
Super Frog*	17.99
Switchblade	6.99
Switchblade 2	8.99
Team Yankee 2 (1 Meg)	19.99
Terminator 2	(see Dream Team)
The Adventures	£21.99
The Greatest	£21.99
The Manager	**19.99**
Their Finest Hour (1 Meg)	19.99
Tornado	22.99
Toyota Celica GT Rally	5.99
Transarctica*	17.99
Troddlers	16.99
Trolls	16.99
Turbo Challenge	8.99
Turbo Challenge 3	16.99
Turbo Outrun	6.99
Twillight 2000*	20.00
U96*	22.99
Universal Monsters*	17.99
Utopia + Data Disk	19.99
Vector Storm*	£19.99
Waxworks	22.99
WWF 2	17.99
WWF	(see Dream Team)
Ween	17.99
Wing Commander (1 Meg)	22.99
Wizball	6.99
Wizkid	16.99
Zool	13.99
Zool A1200	16.99

SPECIAL OFFERS

Chuck Rock	10.99
Dizzy Panic	6.96
Kick Off 2 1 Meg	9.99
Kick Off 2 1/2 Meg	7.99
Kick Off 2 Final Whistle	7.99
Kick Off 2 Gaints Of Europe	7.99
Kick Off 2 Return To Europe	7.99
Kick Off 2 Winning Tactics	5.99
Mega Lo Mania	9.99
Prince Of Persia	4.99
Seymour Goes To Hollywood	6.99
Shadow Of Beast 2	9.99
The Kristal	9.99
Thunderstrike	6.99
Turbo Challenge 2	12.99
Turtles 2	12.99

EDUCATIONAL

ADI English (All Ages)	17.99
ADI French (All Ages)	17.99
ADI Maths (All Ages)	17.99
Better Spelling (8-10)	13.99
Better Maths (12-16)	13.99
Compendium 6	26.99
Fun School 2 (6-8)	6.99
Fun School 2 (+8)	6.99
Fun School (U6)	6.99
Fun School 3 (5-7)	16.99
Fun School 3 (U7)	16.99
Fun School 3 (U5)	16.99
Fun School 4 (5-7)	16.99
Fun School 4 (7-11)	16.99
Fun School 4 (U5)	16.99
Fun School Paint + Create (over 5+)	17.99
Fun School Spelling Fair (7-13)	17.99
Junior Typist (5-10)	10.99
Magic Maths (4-5)	13.99
Maths Mania (8-12)	13.99
Merlin Maths (5-13)	17.99
Mickey's 123's (2-5)	16.99
Mickey's ABC's (2-5)	16.99
Mickey's Jigsaw Puzzles (5+)	16.99
Mickey's Colours & Shapes (2-5)	16.99
Mickey's Memory Challenge (5+)	16.99
Noddy's Play Time	16.99
Paint & Create	17.99
Playroom (3-8)	17.99
The Three Bears (5-10)	13.99

JUNIOR ADVENTURE

The Wind in The Willows	13.99

JOYSTICK & ACCESSORIES

Computek Fighter	5.99
Quickjoy Topstar	17.99
Quickjoy Turbo	10.99
Quickjoy Jetfighter	11.99
Cheetah 125+	7.99
Competetion Pro Extra	14.99
Competetion Pro 5000	13.99
1/2 Meg Upgrade	24.99
1/2 Meg Upgrade + Clock	26.99
3.5 External Disk Drive	49.99

TDK /VERBATIM

10 x 3.5"	£7.99
20 x 3.5"	£14.50
50 x 3.5"	£35.00
100 x 3.5"	£65.00

PRECISION - BOXED

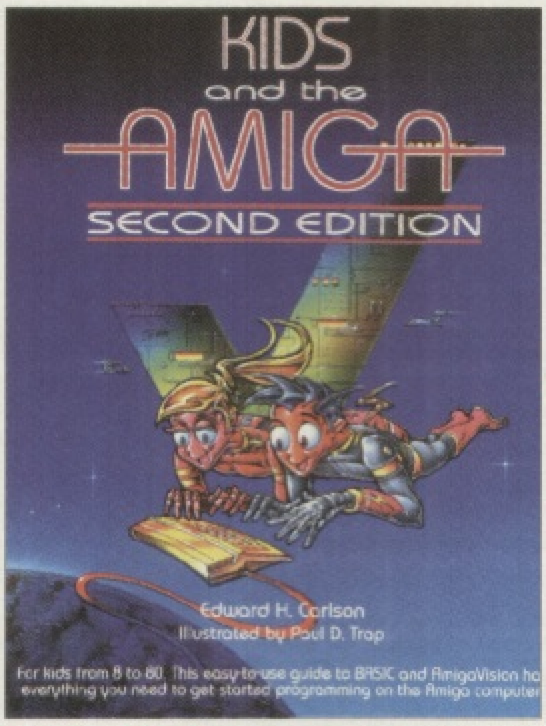
10 x 3.5	6.49
20 x 3.5	11.99
50 x 3.5	26.00

UNBRANDED - LOOSE

10 x 3.5	5.99
20 x 3.5	10.99
50 x 3.5	23.99
100 x 3.5	44.99

BOOK SHELF

In his constant quest for knowledge, Mat Broomfield flips through the pages of four more Amiga books.



KIDS & THE AMIGA
COMPUTER MANUALS LTD. £15.45

'In the year 2000, children who can't program a computer will be as disadvantaged as children in today's world who can't read!'

This astonishing statement was made a few years ago by one of the American government's education spokesmen, and although it may seem a little far-fetched, just consider how far computers have intruded into our lives over the last 10 years.

Of course, the British government has long appreciated the need for computer literacy in our schools, but the budgets allocated for such purposes are subject to the merest whim of whoever holds the chequebook.

If you have children, you could do far worse than giving them some grounding in computer programming, and this book is quite a good starting place.

It's a DIY course in Basic and Amigavision programming for 'children' aged 8 to 80. Of course, there's no version of Basic bundled with modern Amigas, but the language is so similar to AMOS (which is really just an extended version of Basic) that the lessons in this book can be applied equally to the latter language.

Each of the 32 lessons focus on a narrow aspect of the language, giving instructions in easy-to-read and usually entertaining language. However, as the book is written by an American, some potentially unfamiliar expressions and phrases occasionally rear their heads. Anyway, the lessons are accompanied by copious examples and a few 'quizzes' so that the students can test their new-found knowledge.

Each chapter is also suffixed by parents and teachers notes, enabling it to be used in a formal educational setting if required.

The book employs frequent use of cartoons, metaphors and other attention grabbing devices as a way of aiding the student's memory, and I feel that these work very well. The programs all serve some practical purpose which the reader can appreciate and identify with. A good book for teenagers, and probably the simplest introduction to Basic that I've seen.

Available from: Computer Manuals Ltd., 50 James Road, Tyseley, Birmingham, B11 2BA. Tel: 021 706 6000.

NEW MACHINES

Thanks to the release of the A4000 and A1200, the Amiga world is undergoing a revolution at the moment. One side effect of this is that virtually all existing books are outdated to some degree. This could be because they refer to old versions of Workbench, or don't take into account new screen modes or processors, or simply because they refer to software which is no longer bundled with the new machines. Therefore, unless specifically stated, you can assume that any books reviewed here, refer to earlier versions of the Amiga.

AMIGA BASIC – A DABHAND GUIDE
DABS PRESS £15.95

As I've mentioned time and again, there is no version of Basic supplied with the Amiga anymore, and therefore the language cannot be thought of as the universal standard for all machines. AMOS makes extensive use of Amiga Basic-type commands, but adds many more of its own to the instruction set. These things considered, I can't help but wonder who on earth is brave (or foolhardy) enough to publish a book solely about Amiga Basic.

Having said that, this book has a great deal of merit to dedicated Basic and AMOS enthusiasts, because it delves deep into the language, teaching programming techniques not to be found in the Basic or AMOS manuals.

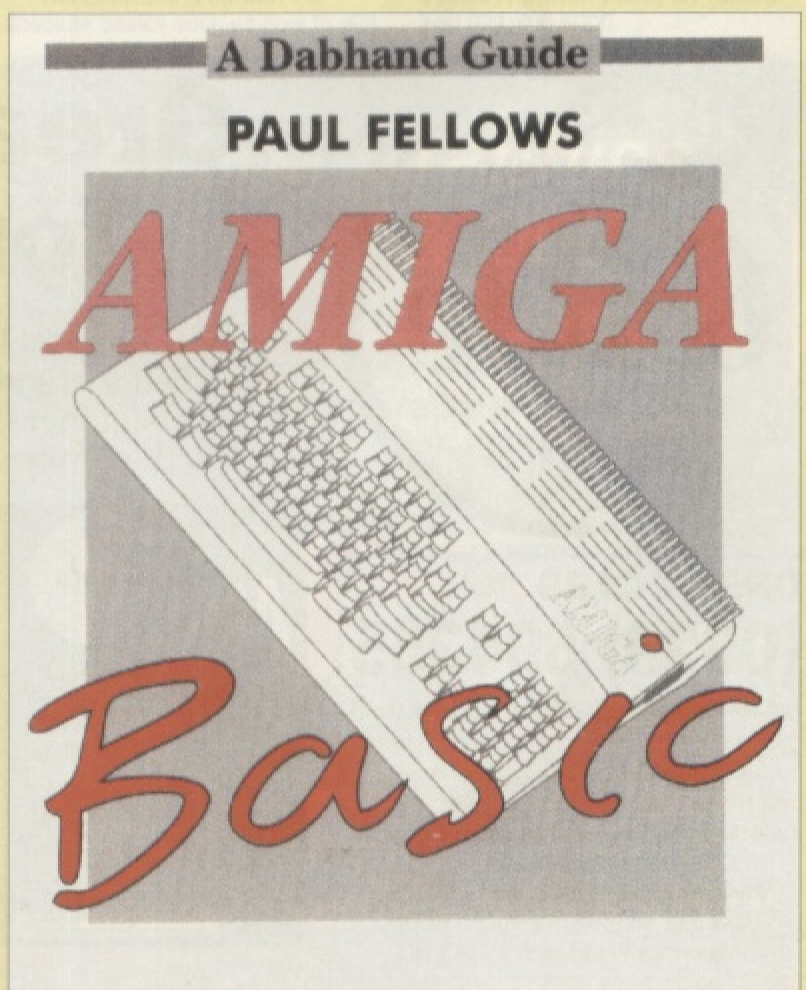
My initial impression is that this book has not really been written with the absolute beginner in mind, although it professes to be suitable for such readers. I felt immediately comfortable with it, and didn't feel that it was unnecessarily laborious in its explanations. This means that it's almost certainly not user friendly for the absolute novice. Instead the book seems appropriate for people who, like myself, once knew how to program decently in Basic, but have since forgotten a lot of its subtleties. More of a refresher-cum-reference manual if you will.

Unlike many programming tutorial books, the Dabhand Guide includes some pretty substantial example programs, several of which extend over two or more pages. I particularly liked the database program being a fan of such things, but I was also intrigued by a less ambitious program to test the effects of different vocal combinations using the Amiga's speech synthesizer.

The book is almost totally devoid of graphics which would have helped to keep it lively, but at over 550 pages for £15.95, it's a weighty enough tome already!

This is probably the best book on Amiga Basic that I've seen. It doesn't patronise the reader at all, which is good considering the fact that its probable audience will mainly consist of people who already have a little Basic programming knowledge. The book sets some good programming guidelines which will apply equally whichever version of Basic you're using.

Available from: Dabs Press, PO Box 48, Prestwich, Manchester, M25 7HF. Tel: 061 773 8632.





INSIDER GUIDE – AMIGA 1200

BSB £14.95

Although the A4000 was the first of Commodore's new range of Amigas, its high price has, to a certain extent, suppressed general interest in it so that it's viewed as an interesting curio by most people. The same can NOT be said of the A1200 which provides unparalleled power for less than £400. If letters to CU are anything to go by, interest in the machine is running near fever pitch at the moment.

Considering their 'book a month' philosophy, it comes as no surprise to learn that Bruce Smith Books have published a guide to the machine. What does come as a surprise is the fact that they've completely altered their existing format to produce a book which is now physically much smaller than previous tomes.

In fact, it's not just the dimensions of the book which have changed, its contents seem quite a departure too. The conversational 'let me take you by the hand' style that started to emerge in earlier 'Mastering' books, seems more fully developed now as Bruce casually chats his way around the A1200, taking us along for the ride.

The book states quite clearly in its opening pages that it doesn't claim to be a complete reference work to every feature of the A1200, rather it aims to guide the reader logically through the sort of essential information that s/he will need to get the best from the machine.

The book is intermittently punctuated with 'Insider Guides', small boxed off areas which give detailed information on a specific (frequently needed) aspect of the machine's workings. These work well, and break up the text.

Speaking of text, you certainly get a lot of it for your £14.95 – 256 pages to be exact! Bruce starts with a brief overview of the machine: setting up, and that sort of thing, then he progresses to discuss the WIMP environment, and other basics such as disks, the purpose of files, etc. Because the book is aimed at the newcomer, it doesn't delve too deeply into the machine, but gives clear explanations of essentials such as how to set a printer up, and how to deal with the virus threat.

As if they hadn't already proven their status as the new 'Masters of the Amiga book scene', BSB's new 'Insider Guide' series gives you even more information for less money. Oh, and the books are easier to read in bed too!

Available from: Bruce Smith Books, PO Box 382, St Albans, Herts, AL2 3JD. Tel: 0923 894355.

AMIGA GRAPHICS INSIDE & OUT

COMPUTER MANUALS £32.45

We're constantly reminded what an amazing graphics machine the Amiga is, but most of us never explore its abilities much beyond creating the occasional screen or animation with *D-Paint*. One of the most rewarding and powerful ways to use the Amiga's graphics is to program them for yourself. Not only is this often more memory efficient, but you can achieve results that simply aren't possible with off-the-shelf packages.

Unfortunately, standing between your ideas and actually putting your graphics on the screen is a complicated web containing such demons as the copper, bobs, Rastports, blitters and viewports. Not to worry, that's where this book comes to the rescue.

Amiga Graphics is, first and foremost, a programmer's book. That's not to say that it's filled with double-dutch listings like the ROM Kernal Manuals, but its contents are geared towards programmed graphics and animation, as opposed to creating a single static masterpiece with an art package. It focuses on two languages – Amiga Basic and C, and there are frequent examples given in both languages.

The book starts off with the absolute basics such as how to plot points and draw lines, and I feared that it would be just another beginner's guide. However, by page 93 (there are 600 in total!) we were already looking at Intuition and RastPorts.

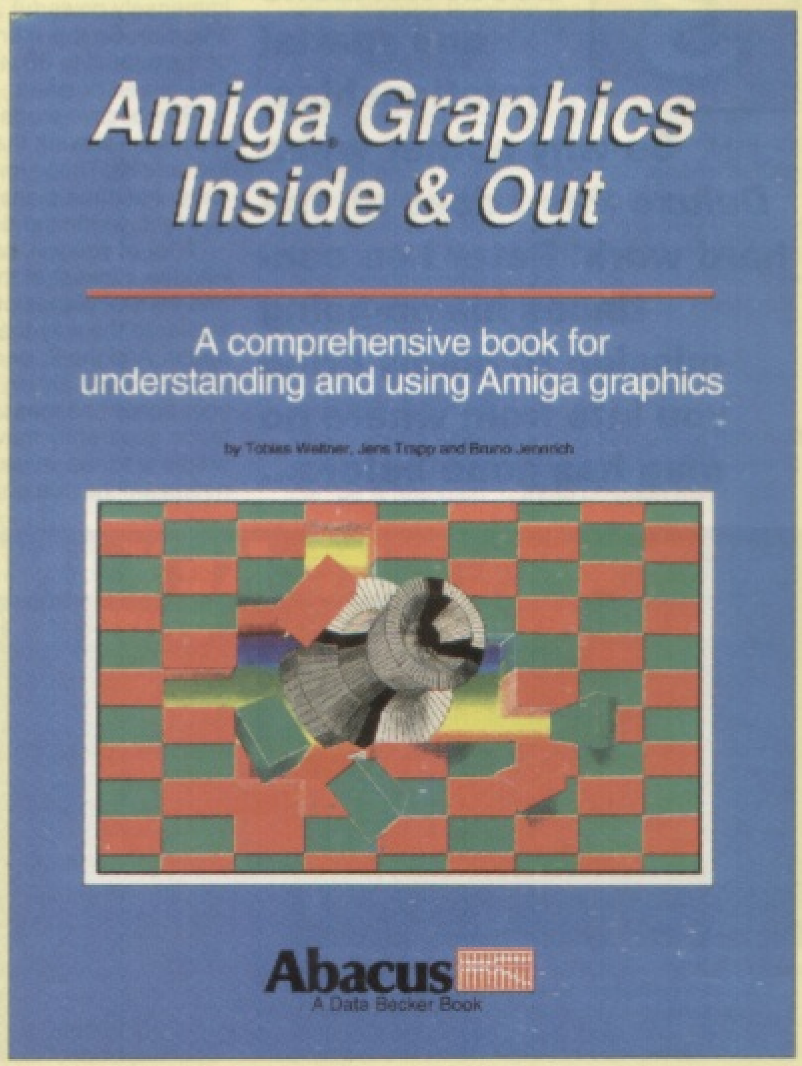
Section four in the book looks at ViewPorts and explains how to program the Copper in Basic. I was quite impressed by this because it goes well beyond the scope of most tutorial books, and I wasn't even a third of the way through yet!

There are many areas of interest to the non-programmer too, such as the information about the Amiga's screen modes, and the (extensive) chapter covering bit-mapped fonts. Trouble is, at £32.45, there aren't really enough non-programmer bits to justify the cover price.

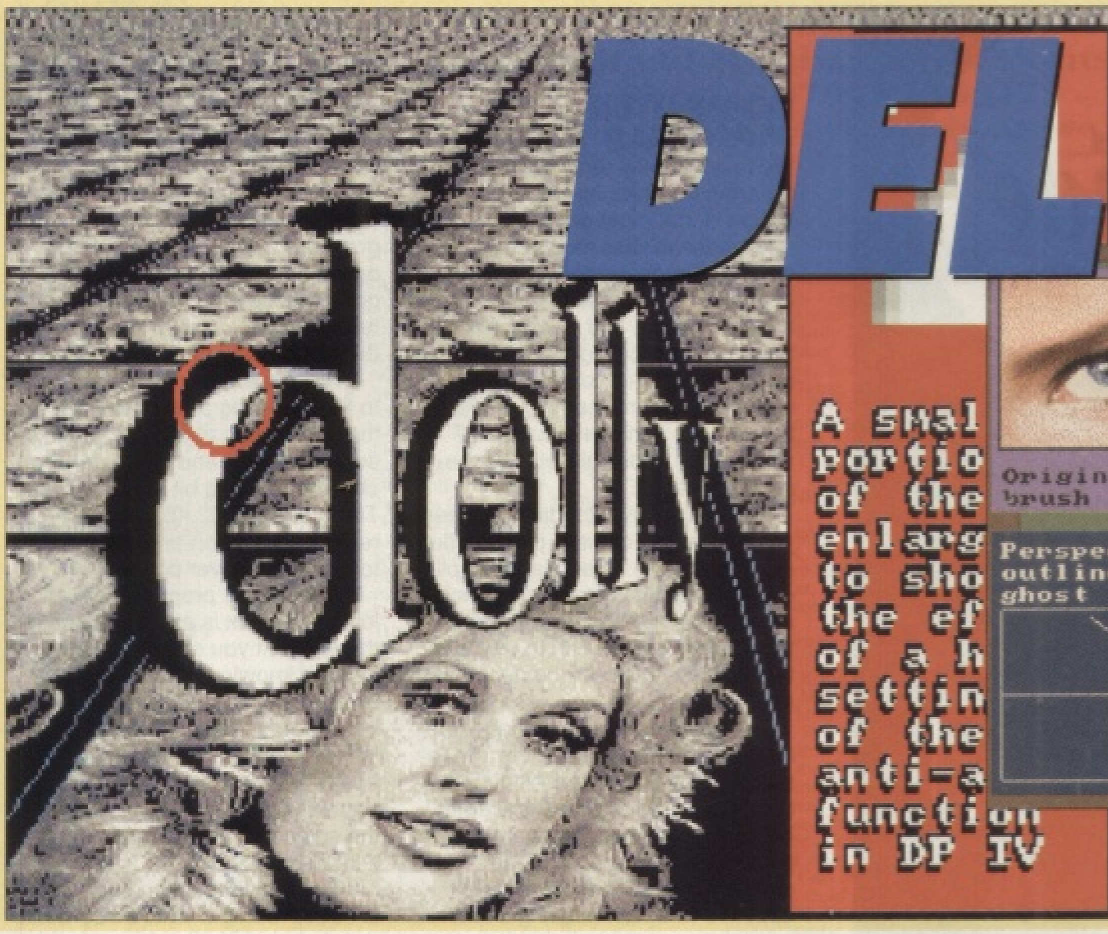
Anyway, for programmers at least, the book is excellent, and by the end of it you should have enough knowledge to write your own art or CAD package, or some very impressive game animations. Unfortunately, 3D vectors are only briefly touched upon, but by contrast, generous coverage is given to the subject of printer output and screen dumps.

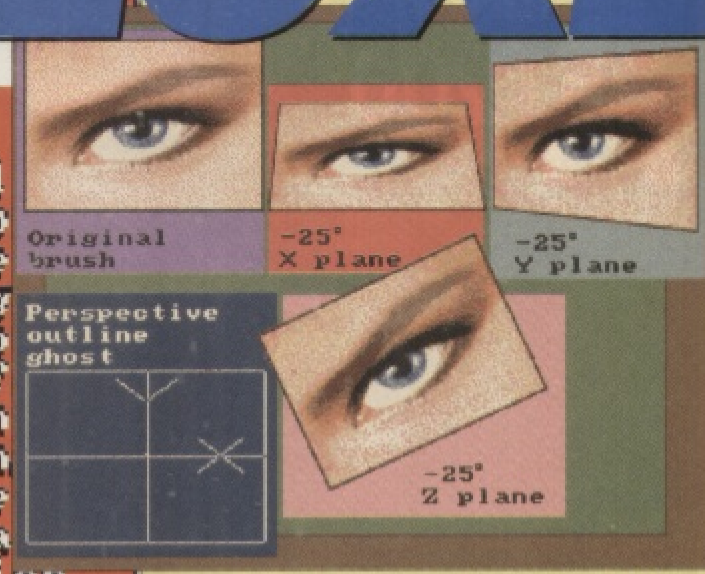
Quite an interesting book, which is rapidly being overtaken by new developments in the Amiga hardware forum.

Available from: Computer Manuals Ltd, 50 James Road, Tyseley, Birmingham, B11 2BA. Tel: 021 706 6000.



DELUXE





Left: Anti-alias in Perspective mode gives a smoother feel to the image. The section of the text, which was vanilla to start with, had the edges smoothed using intermediate colours. *Top*: Using a single brush you can see the effects of perspective rotation in the X, Y and Z planes.

PART 3

Life's too short to learn all about horizons and spatial relationships. So why bother when *Deluxe Paint* does all the hard work! Peter Lee continues his on-going mission to boldly bring you info from where no mag has gone before...

As our journey into the heart of *Deluxe Paint* progresses, we're bound to hit a stumbling block. And for a lot of people, this is Perspective. The actual nuts and bolts of *DPaint*'s Perspective commands are so immensely powerful, it's no wonder they can be a barrier. So this month we're devoting the whole of the tutorial to 3D, taking in its powerful effects on fills and brushes.

Perspective mode works with your own brushes – artwork that you've clipped out from the screen. These images can then be rotated along the three planes which define our 3D world – height, width and depth.

A lot of you will, no doubt, already be familiar with the concept of the X and Y axis, horizontal and vertical planes on screen which are very similar to the way that we use a sheet of graph paper. And the Z, or depth plane, is not so hard to understand either. If you use the surface of your screen as measurement 0, then any distance apparently moving back into the screen will be a minus value, and everything seemingly nearer will have a positive value.

This is, of course, a major con. In the words of Einstein himself, it's all relative – just believe it and it's true! Thanks to evolution and education, the brain allows itself to be fooled into thinking that what's drawn on a flat surface has depth if the illustration follows the rules we've come to expect. If you look at illustrations of cave paintings, you'll see that the animals, hunters and landscapes are all flat – laid above and below each other as in a child's drawing. Even the Bayeux tapestry has no depth cueing. But we've come a long way since then, and we can let the computer do all the hard work with depth which escaped painters before the 15th century.

IN DEPTH

DPaint uses one-point perspective to display real depth, and you can place the centre of this 3D world anywhere on screen. This allows you to experiment with different viewpoints; for instance if you were painting a 3D wall, placing the perspective centre at different places on screen would give the effect of standing nearer or closer to the wall, and making the view wide-angle or close-up. The program default is to have the perspective centre bang in the middle of the screen, but you can alter it using the Perspective\centre pull-down menu option and re-positioning the crosshair anywhere on screen. You can even do this after giving a brush perspective to try out fresh ideas.

TIP: If you are filling a screen with a perspective option, pressing the SPACE bar will stop and undo the operation, and pressing ESCAPE will finish the fill at the current position.

TIP: Even when you have given your brush perspective, you can still edit the Perspective\settings box without cancelling any rotation.

PAD IT OUT

Once you have an image as a brush, you can manipulate it in 3D space with simple key

PERSPECTIVE KEY INFO

NUMERIC KEYPAD

Enter – toggles Perspective mode on or off
Keys 7 and 8 – Rotate around the X axis (9 resets X)
Keys 4 and 5 – Rotate around the Y axis (6 resets Y)
Keys 1 and 2 – Rotate around the Z axis (3 resets Z)
Key 0 – Reset all angles to zero
Key . (full stop) – Reset centre point
Key – (minus) – Fill screen (Escape halts, Space aborts)
Shift 9 – Fix X axis
Shift 6 – Fix Y axis
Shift 3 – Fix Z axis
ENTER – enter or leave perspective mode

OTHER KEYS

Shift and any rotation key will rotate the brush by the angle specified in Angle Set in the Perspective requester box.

Keys ; (semi colon) and # – Moves the brush along its fixed axis in a direction perpendicular to its plane.

Shift @ and Shift increase the fixed axis movement in large increments.

Ctrl – Fixes the Y axis to let you move the brush in the Z and X directions.

\ (backslash) – Acts as a toggle for the Angle/position display on the menu bar.

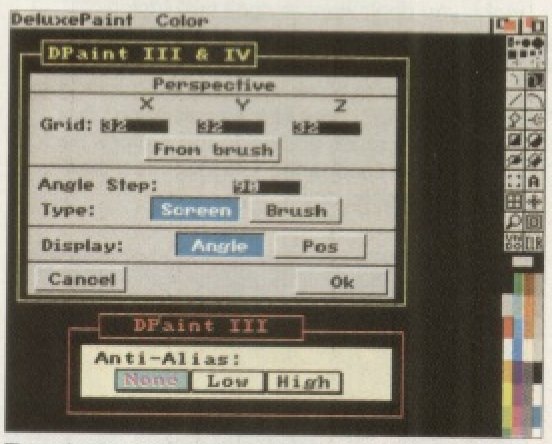
Shift < and Shift > move your viewpoint nearer or further from the brush.



By using various perspective rotations and viewpoints it's possible to create striking imagery such as this with the meagre resource of one picture.



This image uses the Perspective grid option to accurately position each frame in space as if they were receding into infinity. The bulk on each frame is a simple drop shadow otherwise each picture would be very flat and boring.



The main picture shows the perspective requester on *DPaint IV*, which is almost identical to the one in *DPIII*. The only difference is that you select anti alias from here in *III* (see small picture), and have to call up a special pull-down menu in *IV*. Details of controlling perspective are given in the article.

presses. Selecting the Do option from the Perspective menu (or Enter on the keypad) presents you with your brush on screen, outlined by a ghost of its rectangular boundary, and a crosshair which marks the centre of the perspective world. The brush's apparent perspective is changed by using the numeric keypad. Once you begin to alter the brush, the three figures printed on the menu strip begin to show the degree to which the brush is being rotated in X, Y and Z space. (See the separate perspective key info box for details on which keys actually do what). As you edit any of the Perspective angles, your ghosted brush will move accordingly on screen. At any time you can move your brush ghost around the screen with the mouse, and see in outline how it will be printed relative to the centre point – it will be different wherever you place it .
TIP: The most under-used feature of Perspective I've found is viewpoint change. Pressing Shift and @, or Shift and ; keys , or Shift < and Shift >, effectively move you closer or further away from your brush in 3D space. This is great for effectively re-sizing heavily angled brushes which tend to have parts of themselves hanging off the actual screen.

ALIAS – PRO OR ANTI?

It is possible, and sometimes vital, to control how the brush is painted on screen during perspective draw. In *DPaint III* the Perspective\settings requester has three options for anti-aliasing: none, low and high. OK, but who needs it, and what's in it for you? Anti-aliasing is a computer technique for fooling the eye (another one!) by trying to mask the jagged edges which are bound to occur when lines are drawn at an angle on low-res screens. It does this by finding an intermediate colour between the edge of your brush and the background, and filling in the saw-tooth jagglies. So who needs it? Anyone who cares about the look of their finished work. The one problem is speed. Having the anti-alias setting on high (the preferred option) results in the processor taking up much more time to calculate the new image. But it is worth it.

In *DPaint IV*, the anti-alias function is independent of perspective, but is still as useful (access it via the Effect menu).
TIP: Anti-aliasing produces the finest results when there is a good range of colours for it to work with. If you get poor results the first time, try freeing up three colours, and giving them a range slightly lighter and darker than the main brush edge colour and the background.

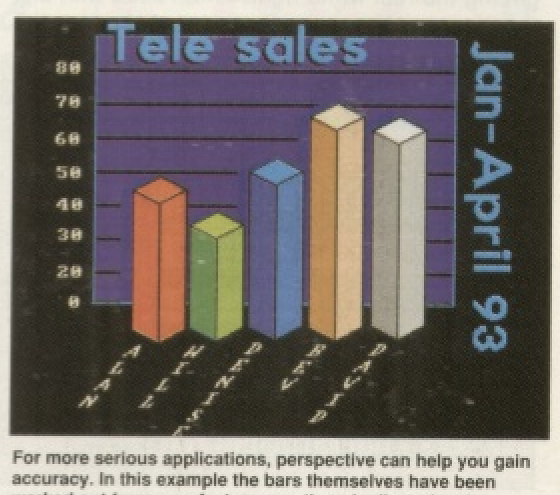
FILLING IN THE GAPS

One of the in-built effects offered by *DPaint* is the ability to fill the screen with the current brush using your perspective settings. This is an ideal way of creating that other great 3D artistic con, the vanishing point; this mimics the way straight lines look as though they meet somewhere off into the distance – like a long, straight road, or railway lines. In fact, the perspective centre in *DPaint* is the vanishing point. Provided you have selected an X rotation (that is, leaned the brush back into the screen) and your centre point is roughly in the centre of the screen, then filling the screen will force the brush to be painted repeatedly as if it went on endlessly into infinity.
TIP: To avoid any unwanted background colours acting as spacers in your symmetrical brush fills, when clipping them out make sure that the brush crosshairs are actually on the edge pixels, and not outside them.

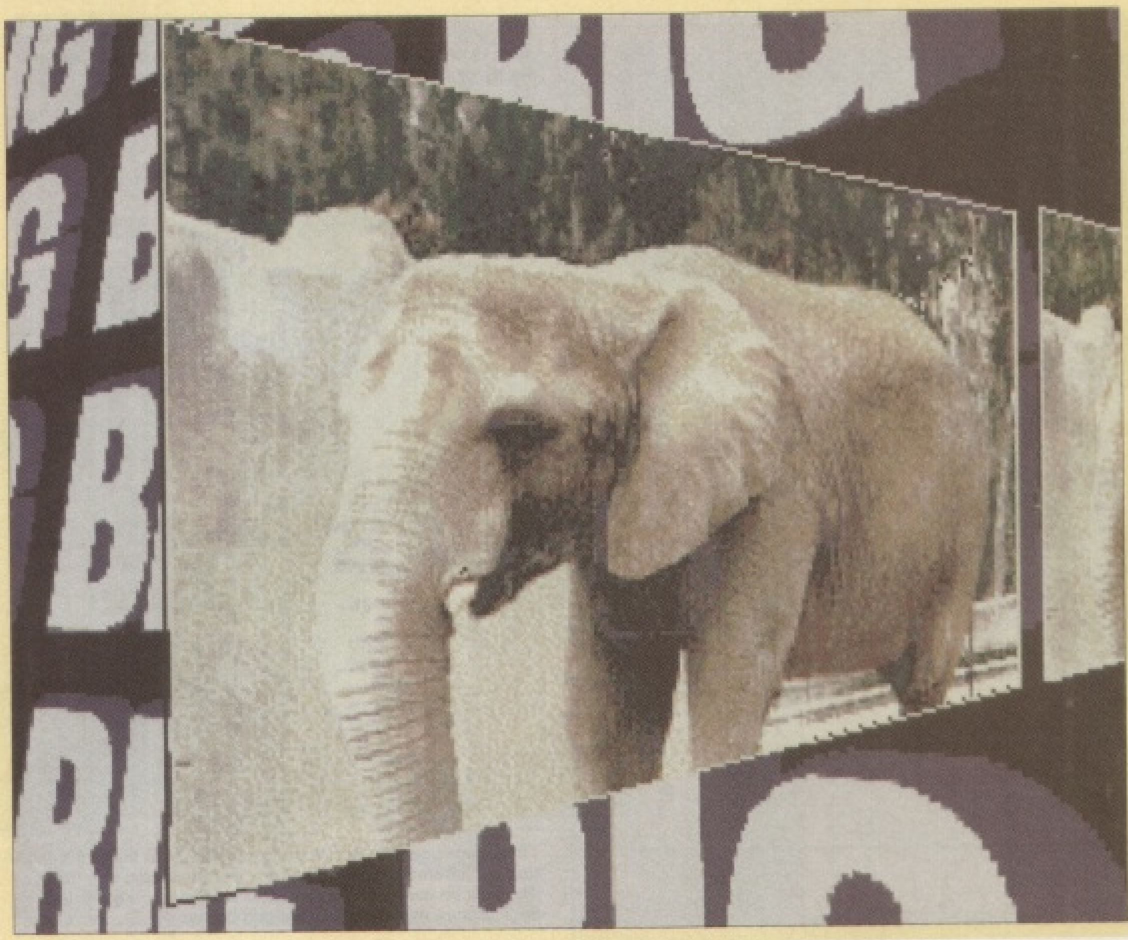
Fill screen isn't the only option open to us with perspective defined. *DPaint* allows any shape – regular or custom – to be filled with the current brush in the chosen perspective setting. This feature is accessed through the Fill requester, and although not massively useful, it gives you the chance to localise areas of depth filling without having to wait for the entire screen to be drawn (which can take several minutes if high anti-aliasing is selected).

GRID LOCK

When you're working with a number of different brushes, each having its own rotation values, it can be a real pain to try to position them accu-



For more serious applications, perspective can help you gain accuracy. In this example the bars themselves have been worked out from a perfect square, then duplicated and coloured. If you want pro results, it's no good relying on guesswork, even more so at higher resolutions.

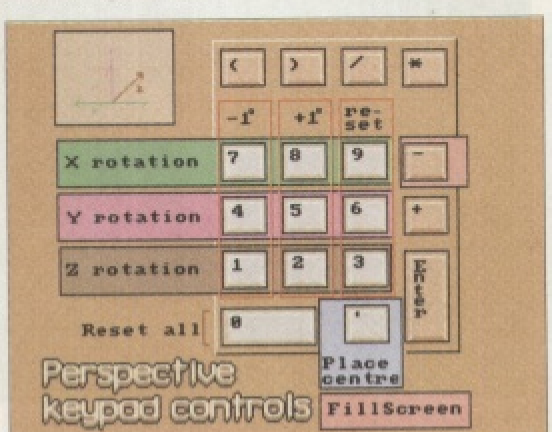


Adding to the massive nature of the subject, perspective brings this fine elephant striding out of the screen. Note how the background text has been tilted in space the opposite way to give a heightened impression of depth. Once again a drop-shadow worked wonders on the text to give extra depth.

rately in relation to each other. Help is at hand with the Perspective grid requester (not to be confused with *DPaint*'s general grid function, which is accessed either from the tool menu or by pressing G). When you select Perspective\settings in *DPaint III*, you have the option of entering values in X, Y and Z spacing boxes. Once set, your brush will snap to this invisible 3D grid regardless of the rotation you specify on the keypad. And as soon as you pick up a brush, the program sets these co-ordinates to the co-ordinates of the brush until you change them. Another useful feature of the Perspective requester is Angle Step; the value you enter in here defines the pre-set amount of rotation which will be applied to your brush when you use the keypad/Shift key option (Pressing Shift and a keypad figure responsible for rotating your brush in space will tilt the brush by the angle step; default is 90 degrees).

IN USE

Perspective effects take all the mystery out of getting the real world right. When used with digitised images they provide almost professional effects, letting you spin and rotate easily recognisable images in space. But as an aid to hand-drawn images, *DPaint*'s perspective takes a lot of the pain away. Simple everyday objects such as tumblers or box-shapes (televison sets, computers and so on) can be drawn perfectly by taking advantage of 3D tools. What would take an ordinary artist several hours to create can be drawn in minutes. It also means you don't have to mess up your artwork with a lot of nasty construction lines. Vanishing points – who cares? And while *DPaint* doesn't pretend to do all the work – after all, it's not a dedicated 3D modeller – it gives you the power to create real objects from many angles with just a little effort. Take the interior of a room for instance. All you need do for a three-wall view is create a rectangle with the wallpaper of your choice, and use this as a brush for the basis of each of the walls, tilting the view to represent the real world. The floor, too, can be drawn as a rectangle, with any kind of tile or carpet pattern you care for, then foreshortened using Perspective so it saves you hours of guesswork – and probable ultimate dissatisfaction.



Perspective keys made simple. It really is worth working out what they do to speed your work along.

Probably the most important thing is to start visualising the objects that you draw in more than two dimensions, then you can use the perspective tools of *DPaint* to position them within your scene. As long as you think in more than two dimensions, the construction of your image becomes merely one of logistics, not one of visualisation.

Simple text, when anti-aliased, can be given a dramatic impact by positioning it in 3D space; from Star Wars recession, where the words disappear into the screen, to acute perspective which emphasises the massiveness of the letters, these techniques will give your work a real edge over standard techniques.

PICTURE A DIMENSION

Getting a real-life object looking anything near believable in a 3D environment is one of the great stumbling blocks for any kind of artist. But *DPaint* gives you the edge over ordinary methods with its ability to tame perspective.

Take a simple object such as a tumbler. Normally you would draw two ellipses for the mouth and base, then join them. But how do you get the right position for them? What does a glass really look like from above? You don't really need to know; seen directly from above, both top and base are circles, and by holding down SHIFT and drawing an open circle in *DPaint*, a perfectly proportioned circle can be drawn.

By cutting this out as a brush we can view it from any angle after selecting Perspective/Do from the pull-down menu.

By rotating the circle 60° in the X plane (tilting it backwards in effect) you turn it into an ellipse, and you know it's bound to be graphically correct. Creating the base is a simple matter of adding distance between you and the brush in space by pressing the Shift @ key combination.

The top and bottom of the tumbler are joined by straight lines, and the liquid is added using different values of blue.

If you look at the straw, you'll notice that after it enters the liquid its image is refracted – bent out of true by the effects of light passing through the denser liquid. It's a little touch, but after going to the trouble of getting the glass right, you don't want to spoil the illusion.

Finally the shadow; the whole image – glass, liquid and straw – were picked up as a brush and changed to black by selecting Colour from the Mode menu (key F2); by calling on Perspective again and tilting the X plane back to 135°, the foreshortened shadow effect was created and pasted down.



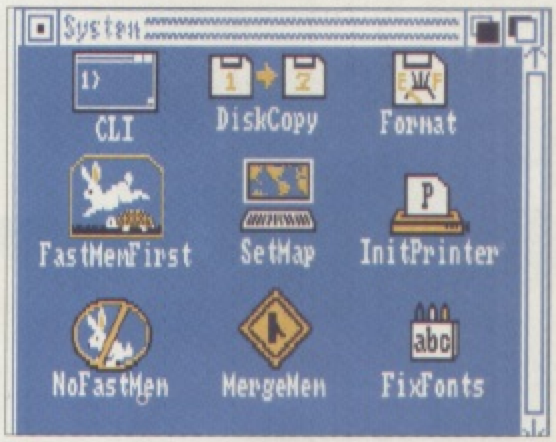
Perspective for that refreshing change...

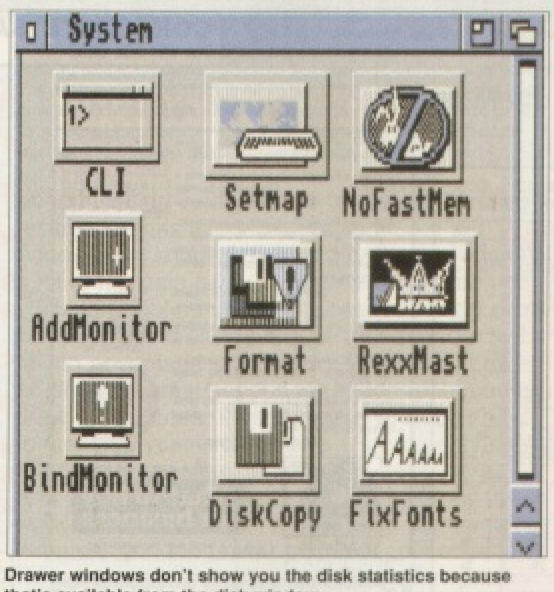
NEXT MONTH

In the next issue Peter Lee will be lifting the lid on palettes, colour mixing and cycling with equal emphasis on *DPaint III* and *IV*, which adopt different approaches in these areas. He'll also be making his first cuts in HAM mode for *DPaint IV* users. Plus lots more graphic ideas and tips to help you squeeze the most out of Electronic Arts' brilliant software.

WORKBENCH TUTORIAL PART 2

After unravelling the mysteries of icons, Mat Broomfield continues his wander around the wonders of Workbench, the universe and everything.



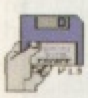


Drawer windows don't show you the disk statistics because that's available from the disk window.

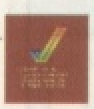
Last month we took a preliminary glance at the way the Workbench screen is laid out and talked about the purpose of drawers. This month we'll continue where we left off with windows, and we'll also be exploring some of the menus.

If you were paying attention, we opened up a window by double clicking on an icon, and we then looked at what the various icons represent. Now let's go back and take a closer look at the window itself.

Because the windows are different according to the version of Workbench you're using, you'll remember that we used special symbols to indicate text that's specific to a particular version. Any text that begins with this character:



applies only to Workbench 1.3 or earlier, whilst



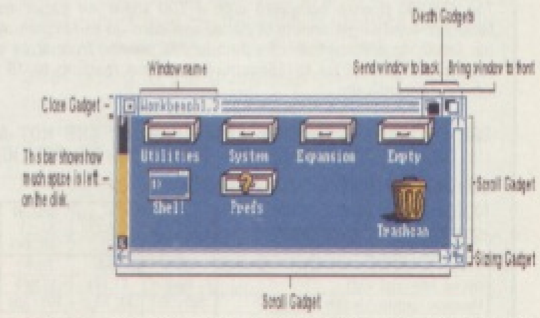
denotes text solely applicable to version 2.0 or higher.

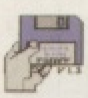
WHAT'S IN A NAME?

So why is it called a 'window' in the first place? Well, in the same way as a window in a building offers you a view of some of the inside of the building, a Workbench window offers you a view of some of the contents of a disk. However, unlike a building window, those found on the Workbench screen actually give you a certain amount of information about the disk itself.

At the top of the window, there's a bar containing the name of the window, in our case Workbench.

Elements of a Workbench 1.x window





Running down the left-hand edge of the window is a black and orange gauge with a letter 'E' at the bottom, and an 'F' at the top. This tells you approximately how full the disk is, and the nearer to the 'F' the orange bar is, the less space remains. If you open a sub-directory window (such as System), this gauge will be absent – remember a sub-directory is simply a division within a disk. The top left corner of the window contains a small square with a dot in it, and this is known as a 'close gadget'. You can close the window by clicking the gadget with

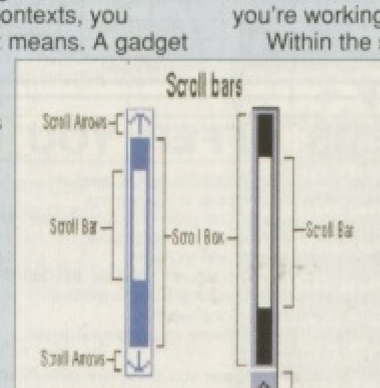


This is the gateway to happiness and a fruitful working relationship with the Amiga. Once you understand how easy and simple to use the Workbench environment is, you'll wonder how anyone ever managed to use a computer without it.

INSPECT-A-GADGET

As you learn more about the Amiga you will constantly encounter the word 'gadget'. Because this word is used in many different contexts, you might be confused about what it means. A gadget is a graphic image which may appear in a window, requester or on the screen, and which has been programmed to perform a specific function when manipulated with the mouse. We've already looked at zoom, close and depth gadgets but let's look at some other types:

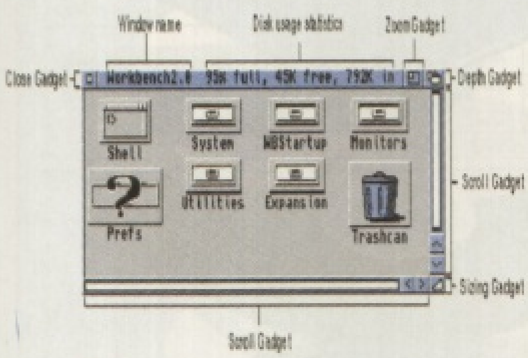
Scroll Gadgets – This is a large gadget comprising three elements. Although its appearance and layout differs between Workbench 2.0 and earlier versions, it still serves exactly the same function. The main part of the gadget is the scroll box. This box represents the entirety of whatever you're doing. For instance, if you're word processing, the scroll box is equivalent to the document you're working on.

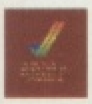


Within the scroll box, there's a white bar called the Scroll Bar. This represents as much of the current project as you can see in the window. Therefore, if you have written a document which is three windows long, the scroll bar will be one third of the size of the scroll box. By clicking the scroll bar and dragging it up and down (or left and right in some cases), you can move around within the document or whatever you're working on. The final element of a scroll gadget is the scroll arrows. These are used to move the display by smaller amounts than the scroll bar.

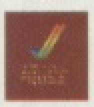
the left mouse button. The top right-hand corner contains two overlapping square gadgets known as 'depth gadgets'. When more than one window is open at a time, they can sometimes obscure one another, but by clicking on the appropriate depth gadget you can bring the required window to the fore. The gadget with the white square brings the selected window to the front of the display, whilst the other gadget sends it to the back.

Elements of a Workbench 2.x window

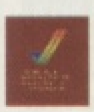




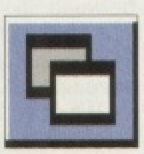
Beside the name of the disk there are three pieces of information which relate to the amount of space in use and remaining on the current disk. The first figure just tells you what percentage of the disk is full (a fairly useless statistic unless you know the capacity of the disk in the first place!). The second figure tells you, to the nearest kilobyte, how much space is left on the disk, while the third figure tells you how much of the disk is occupied.



Common sense would seem to indicate that by adding the latter two figures together, you can calculate the total capacity of a disk, but in fact this is not true; there are a number of factors which can give a distorted reading. You can read the section on disk capacities elsewhere in this article for further details. Suffice it to say that the 'standard' capacity of a brand new disk is about 854K.



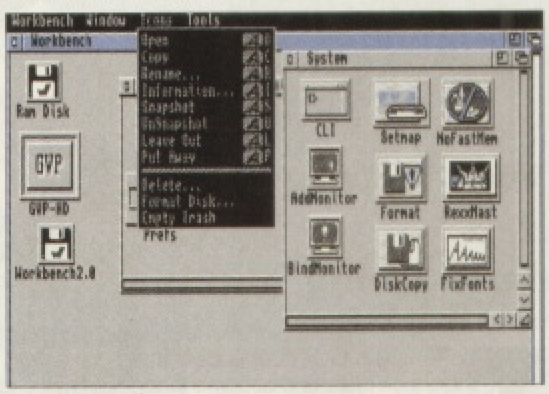
At the top right-hand corner of the window there is a gadget which looks like one square inside another. This is known as a zoom gadget, and by clicking on it, you can instantly toggle between two sizes for the current window. When you first click it, the window will usually shrink (and jump up to the corner of the screen out of the way). Click it again and the window will revert to its previous size. Beside the zoom gadget there's a picture of two overlapping rectangles, and this is called a depth gadget. If more than one window is open at a time, they can sometimes obscure each other. By clicking the depth gadget, the window will move to the front of the display if it's behind any other windows, and vice versa if it's already at the front.

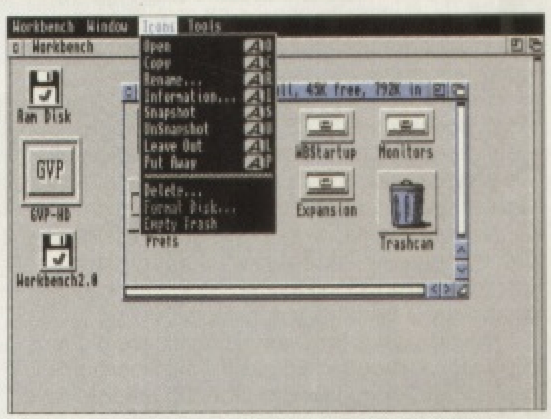


Regardless of the version of Workbench you're using, the bottom and right-hand edges of any window are occupied by gadgets known as scroll bars. They can be used to move the display within the window so that you can see things which might be out of sight, but that's all I'm going to say about them for now!

MENUS

We've had a look at windows and icons, and found out about some of the information that they convey. Now it's time to take a look at some of the Workbench menus.





When you first select one of the menus, the items will be 'ghosted'. This is the Workbench's way of telling you that the options cannot be selected yet. Click on an icon and suddenly most of the items in the icon menu become available.

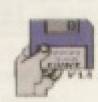
If you press the right mouse button and hold it down, a number of titles will appear in the status bar at the top of the screen. These are called 'menu headings' and they give you some idea about the type of things to be found in the menus they relate to. Keeping the right button pressed, move the pointer on top of one of these headings and a list of further options called 'menu items', will drop down below the heading. You'll notice that many of these menu items appear to be written in faded or 'dotty' lettering. This is known as 'ghosting' and it's the Amiga's way of telling you that these items can't be selected yet. Of course you might be wondering 'What's the point of showing me menu items if I can't use them?'. That's a fair question, and the simple answer is that you will be able to use them under the right circumstances, and rather than keep adding and removing menu items (possibly causing you to forget where they are) the Amiga simply ghosts them until they can be used. This is a standard feature of the Amiga's Intuition interface. Among other things, Intuition provides a uniform way of presenting things such as menus, file requesters, windows, etc.

By ensuring that their programs use Intuition, programmers can guarantee that whenever they write a new program, you will be immediately familiar with the way its menus and requesters work, even if you don't necessarily understand the options that they contain.

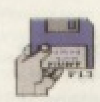
Anyway, back to the subject at hand. Most of the items in the menus can also be performed in other ways, perhaps by opening a CLI window and typing the appropriate commands. However, because Commodore wanted to make the Amiga as easy to use as possible, the menu items can be selected by mouse without requiring any knowledge of programming to use them. Let's look at some of the options:

The first menu under Workbench 1.2/3 is called 'Workbench', and under Workbench 2.0 the equivalent menu is called 'Icons'. It contains items which pertain to the icons and windows we looked at earlier. Initially, all of the options are ghosted, but if you select an icon (by clicking on it once with the left mouse button), most of the options will become available. Here's what they all mean:

Open – This is the same as double clicking on an icon. If the icon represents a disk or drawer (or the Trashcan), it will open a window to show you its contents. If it's a tool or project icon, this item will attempt to load the relevant program.



Close – This is the same as clicking the close gadget at the corner of a window.



Duplicate – This option will only become available if you've selected a disk icon. It allows you to copy the disk (provided it's in Amiga DOS format). The copy will then be renamed 'Copy of' and whatever the original disk title was.

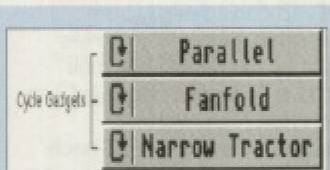
Rename – This option can be used to change the name of the selected icon.



Copy – As with the Workbench 1.2/3 Duplicate item, this option can be used to copy an Amiga DOS disk. However, it can also be used to copy individual files and drawers in exactly the same way.

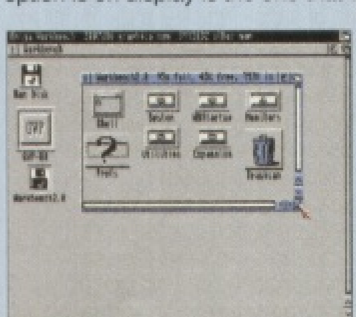


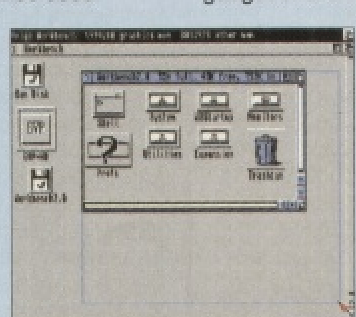
Leave Out – If you move an icon outside its window, it reappears inside the window next time you load the Workbench. With this option, the icon is permanently left wherever you move it. However, the files pertaining to the icon remain in their original position.

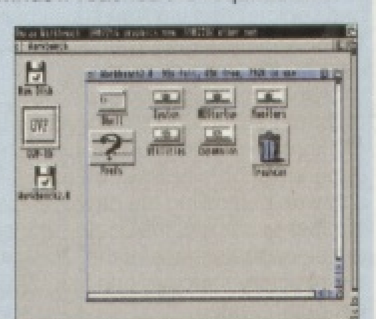


Cycle Gadget – A cycle gadget lets you choose one option from a list. Rather than display the entire list, only one option is displayed, and each time you click the gadget the next option is shown. Whichever option is on display is the one that will be used.

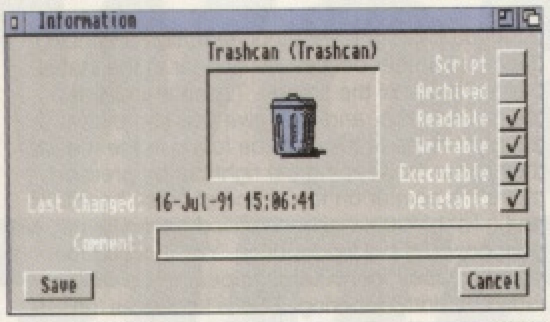
Sizing Gadget – Again, the appearance of the sizing gadget has changed between Workbench 2.0 and earlier versions, but its function is identical. Sizing gadgets (pictured below) almost always appear at the bottom right-hand corner of a window, and they provide an alternative way for you to alter the size of the window. Simply click on the gadget and, holding the left mouse button down, drag the gadget until the window reaches the required size.

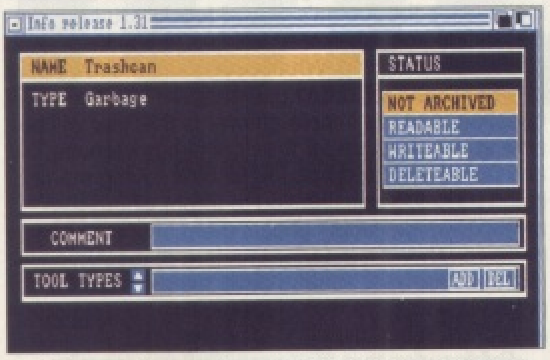




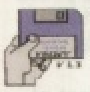


The sizing gadget provides you with a way of altering your view through the current window. Just click and drag the window 'till it reaches the required size.

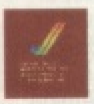




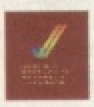
The Info requesters can give valuable information about icons. They can also be used to modify the way that a program loads.



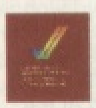
Info – This calls up a special window which gives further information about the selected icon.



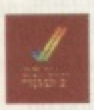
Information – See Info above.



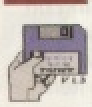
Snapshot – Icons can be moved around within their windows. This will save the positions of all selected icons onto disk.



Unsnapshot – Cancels the effect of the Snapshot option. Icons which have been Unsnapshotted will be placed wherever Workbench wants to put them next time you open the appropriate window.



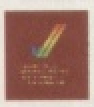
Put Away – Puts icons away that have been moved with the 'Leave Out' option.



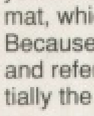
Discard – This is the same as dragging an icon into the Trashcan then selecting 'Empty Trash' from the Disk menu. It permanently erases the selected icon and its associated program or data from the disk.



Delete – See Discard above.



Format Disk – This is only available if the selected icon is a disk icon. It will format the disk using the standard file system. If the disk is already in Amiga DOS format you are offered the option to perform a Quick format, which formats the root block of the disk. Because this is the part of the disk that identifies it and refers to information stored on it, this is essentially the same as formatting, but much faster.

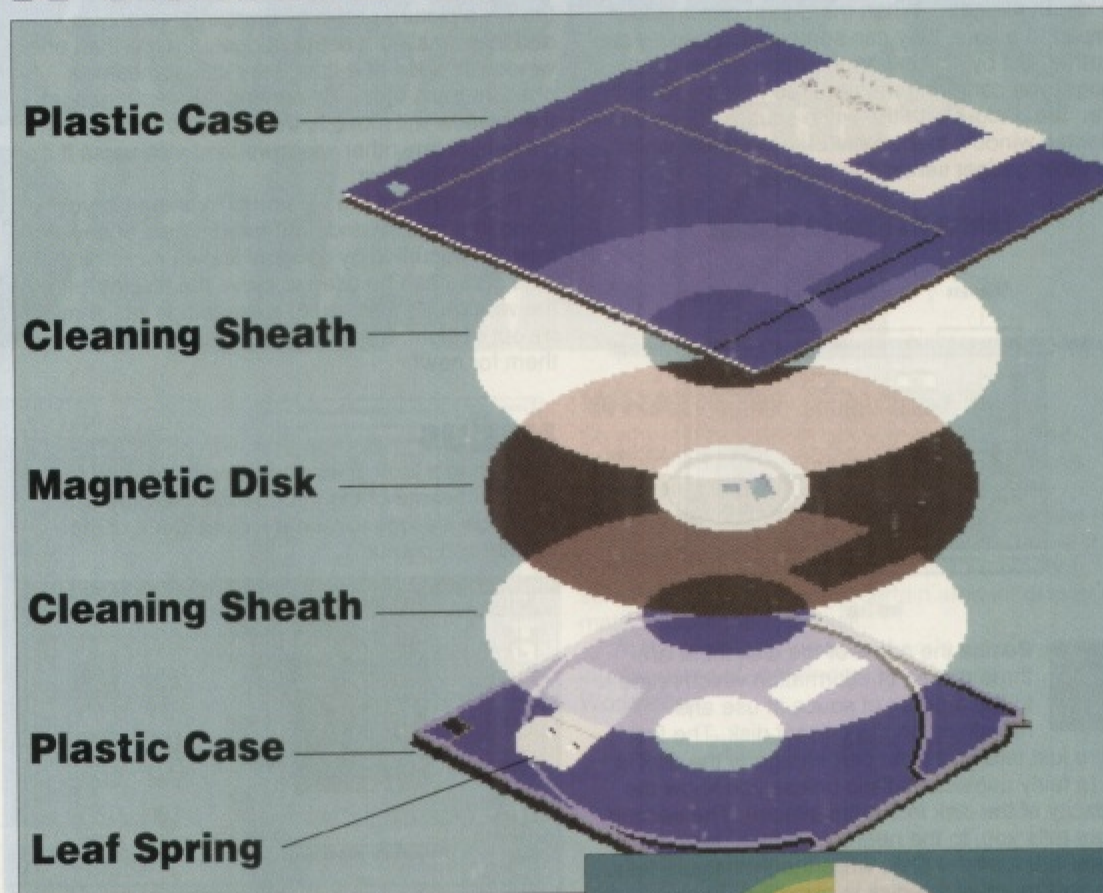


Empty Trash – This is only available if the Trashcan icon is selected. If files have been put into the Trashcan, this will permanently remove them from the disk.

NEXT MONTH

Mat will be back next month as we continue to discover more about the fascinating world of Workbench.

A VOYAGE OF DISKOVERY



The Amiga is totally dependent upon software stored on disk, and at some stage, you're going to have to do more than simply bung one in the drive and wait for a piece of software to load.

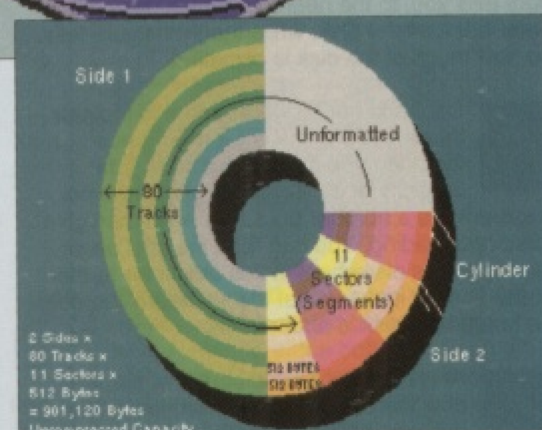
A standard Amiga disk is referred to as a double sided, double density 3.5 inch micro floppy diskette. At its simplest, it consists of two elements, a protective plastic casing (which is the bit you see), and a circular sheet of magnetically responsive compounds which collectively form the disk itself. Broadly speaking, a disk works in a very similar way to audio or video tape, and the same basic technology is used to produce both.

The molecules (grains) on the surface of the disk can be altered when electro-magnetic force is applied to it. By applying this force in precise ways, the molecules can be made to form patterns which can be read and interpreted by the disk drive. The force is applied by the write head, and in the Amiga disk drive there are two such heads, one for the upper side of the disk, and one for the lower. These heads are moved across the surface of the disk in minute amounts by a small stepper motor inside the disk drive. The motor moves the heads in and out across the disk, but the disk must be spinning to allow the heads to reach every part of their surface.

Before a disk can be read or written to, it needs to undergo a process known as 'formatting'. This divides a disk into smaller chunks (known as tracks and sectors) that the Amiga can handle. Unfortunately the formatting process reduces the storage capacity of a disk.

Although Amiga disks are said to have an unformatted storage capacity of 1Mb, the amount of information that you can store on a disk depends upon a number of factors including the software controlling the drive, the precision of the stepper motor and the quality and size of the grains on the surface of the disk, not to mention the directory structure and blocks reserved by the operating system.

Under Workbench 1.2/3, you can only store



between 854 and 888K on a disk. With Workbench 2, a new type of filing system was introduced called FFS (Fast Filing System), which enables you to store up to 901K on a floppy disk.

When you save data onto a disk, it is saved in a standard form known as 'AmigaDOS format' (DOS=Disk Operating System). Files saved in this way can be accessed and copied easily from Workbench. However, when games companies save data onto a disk, they often save it in their own format which can't be accessed or copied without special knowledge and/or hardware.

When a piece of data is written to a disk, each file begins at the start of a new sector and occupies as many complete sectors as it needs. Unfortunately, partially empty sectors can't have any other data stored in them and this can sometimes result in empty areas of a disk which are too small to write anything to, yet which between them can account for a substantial amount of wasted storage space (perhaps in excess of 50K). This process is known as fragmentation, and can be overcome by using a disk optimiser which rearranges the contents of the disk in a more efficient way.

None of this takes into consideration any of the types of compression which can be performed on data before it's even stored on disk. These techniques can squash data so that it occupies as little as 40 per cent of its normal size, but that's another story...

GVP GREAT VALLEY PRODUCTS

THE WORLD's Nº 1 AMIGA PERIPHERALS

PLUG-IN HARD DRIVES FROM ONLY £299

PLUG-IN HARD DRIVE AMIGA 500/500PLUS

The **A500-HD8+** provides the ultimate in hard disk performance, memory expansion and future expandability for the Amiga 500. It incorporates the same VLSI custom chip and FAAAST ROM SCSI driver which are used in GVP's Series II SCSI/RAM controllers for the A1500/2000. As a result the **A500-HD8+** offers unbeatable hard disk performance. The easy-access Autoboot/Game Switch allows the hard disk to be disabled, ensuring compatibility with the few games that will not work with a hard disk.

Every **A500-HD8+** incorporates the latest in hard disk technology with a factory installed and formatted 1" high, low power, 3½" SCSI hard disk, offering storage capacities up to 213Mb.

The **A500-HD8+** also offers the ultimate in expandability. Additional SCSI peripherals can be attached to the external SCSI port. Up to 8Mb of internal Fast RAM expansion can be installed using state-of-the-art SIMM memory modules. The unique internal Mini-Slot allows for future expansion. Every **A500-HD8+** has its own dedicated power supply, ensuring that the Amiga 500 power supply will not be overloaded and an internal fan to prevent the unit from overheating.



WHAT THE PRESS SAY...

'Superb build, excellent aesthetics and blinding speed make this the best A500 hard drive' ... AMIGA SHOPPER

'GVP claims this is the fastest hard drive in the world and none of our tests could prove that wrong ... Untouchable. THE choice' AMIGA SHOPPER

'The best make of hard drive for the Amiga is still GVP Series II. For the A500, the HD8+ A500 is absolutely brilliant - the fastest, best made, most durable and most convenient' AMIGA FORMAT 3/93, (HD8+)

'GVP have done it again!' ... 94%

'... the build quality is excellent ... in terms of performance, their gear is the best ... their equipment is worth every penny!' AMIGA FORMAT 9/92, (A530)

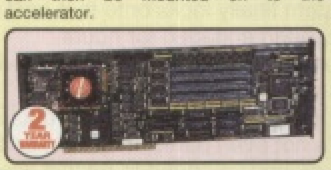
PLUG-IN HARD DRIVE OPTIONS

MODEL	42Mb	80Mb	120Mb	213Mb
HD8+ HARD DRIVE	£299 INC VAT Ref: HAR 0840	£399 INC VAT Ref: HAR 0888	£499 INC VAT Ref: HAR 0922	£599 INC VAT Ref: HAR 0933

ACCELERATORS

FOR THE AMIGA 1500/2000/4000

All GVP G-Force accelerators can be turned into a hard card by adding a Mount Kit (GVA 4251 - £34.95). Any 1" SCSI drive can then be mounted on to the accelerator.



	030 25MHz	030 40MHz	030 50MHz	040 33MHz
Processor	68030EC	68030EC	68030	68040
Speed MIPS	7.48	12.1	15	30
Speed MHz	25	40	50	33
Math co-proc	68882	68882	68882	Built-in
Standard 32-bit RAM	1Mb	4Mb	4Mb	4Mb
Maximum 32-bit RAM	13Mb	16Mb	16Mb	16Mb
Extras	SCSI	SCSI	SCSI	SCSI Ser/Par
Code	UPG 0110	UPG 0430	UPG 0533	UPG 0740
PRICE	£499	£799	£1099	£1499

HARD CARDS

FOR THE AMIGA 1500 & 2000

- *Factory installed Hard Drives*
- *0, 80, 120, 213, & 420Mb options*
- *On-board 8Mb memory sockets*
- *Add up to 6 SCSI devices*



0Mb	HAR 1300	£129
40Mb	HAR 1340	£299
80Mb	HAR 1388	£349
120Mb	HAR 1422	£429
213Mb	HAR 1533	£579

The Impact II HC8 hard cards are the equivalent of the HD8+ hard drive, but for the 1500 and 2000 models. They are some of the fastest hard drives available, and incorporate an unpopulated 8Mb RAM expansion.

Return the coupon now for your *FREE* copy of Silica Systems NEW GVP CATALOGUE

SOUND SAMPLER



FOR ALL AMIGAS

- *8-bit stereo sampler*
- *Plugs into parallel port*
- *MIDI support for song input*
- *Extensive editing features*

For the semi-professional and audio hobbyist a high quality 8-bit stereo sound sampler that connects into the parallel port on any Amiga 500, 600, 1500, 2000 or 3000 computer. Combined with one of the fastest, most powerful and easy-to-use sound and music editing programs available. Includes 4-track soundtracker file compatible sequencer.

~~£49.95~~ £39.95 Ref: MUS 2500

VIDEO GENLOCK



FOR ALL AMIGAS

- *2x Composite Video, 1x S-VHS inputs*
- *RGB Composite video & S-VHS outputs available simultaneously*
- *Sound mixer, 2 mono inputs and 1 output*
- *Full software control via control panel, hotkeys and/or ARexx*

GVP's G-lock genlock is a true price/performance breakthrough. The G-lock genlock works with all Amiga computers and even supports the new Chroma Key modes of the ECS/AA chip set. It is the only choice for the mid-range Amiga video enthusiast.

Ref: VID 2500 £349

HD8+ HARD DRIVE / A530 HD & ACCELERATOR

	HD8+	A530
HARD DRIVE		
SCSI HARD DRIVE 40, 80, 120 & 213Mb VERSIONS	•	•
ULTRA FAST ACCESS	•	•
TRANSFER RATE UP TO 2,100K/sec* (*THE RATE OF THE 213Mb HD)	•	•
ACCELERATOR		
40MHz 68030EC CPU		•
OPTIONAL 68882 MATHS CO-PROCESSOR		•
RUNS AT 12.1 MIPS (FASTER THAN AN A3000!)		•
HARDWARE SUPPORT TO MAP KICKSTART INTO 32-bit WIDE FAST RAM FOR FASTER OPERATION		•
RAM BOARD		
UP TO 8MB OF 8 OR 9-bit FAST RAM (8 OR 9-bit WIDE SIMMS - 120ns OR QUICKER)	•	
UP TO 8Mb OF 32-bit WIDE FAST RAM (32-bit WIDE SIMMs - 60ns)		•
1Mb POPULATED		•
OTHER FEATURES		
'CUT-OFF' FOR 100% GAME COMPATIBILITY	•	•
SCSI CONTROLLER FOR UP TO 7 DEVICES	•	•
VLSI CUSTOM CHIP	•	•
FaaaST ROM SCSI DRIVER	•	•
IDENTICAL COLOUR & STYLING TO THE A500	•	•
BUILT-IN FAN TO PREVENT OVERHEATING	•	•
DEDICATED POWER SUPPLY	•	•
'MINI-SLOT' FOR FUTURE EXPANSIONS (E.G. PC EMULATOR)	•	•
REMOVABLE MEDIA SUPPORT	•	•
DIRECT MEMORY ACCESS (DMA) STYLE FOR ULTIMATE PERFORMANCE	•	•
EASY-TO-USE SOFTWARE	•	•
2 YEAR WARRANTY	•	•

PLUG-IN HARD DRIVE + ACCELERATOR AMIGA 500/500PLUS

The **GVP A530** incorporates the same 68030EC processor found in most of the new GVP G-Force accelerator range, as well as using the same VLSI custom chip and FAAAST ROM SCSI driver that is used in GVP's Series II SCSI/RAM controllers for the A1500/2000.

It also incorporates the Motorola 68030EC processor running at a blistering 40MHz and the latest in hard disk technology with a factory installed and formatted 1" high, low power, 3½" SCSI hard disk offering storage capacities up to 213Mb. Additional SCSI peripherals can be attached to the external SCSI port. Up to 8Mb of 32-bit wide Fast RAM expansion can be installed, using state-of-the-art SIMM memory modules (1Mb supplied as standard). A 68882 maths co-processor can also be added to the unit to boost the machine's math calculations. Every **GVP A530** has its own dedicated power supply.



"... the build quality is excellent ... in terms of perfomance, their gear is the best ... their equipment is worth every penny'. 94% AMIGA FORMAT 9/92

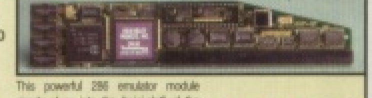
PLUG-IN HARD DRIVE & ACCELERATOR OPTIONS

MODEL	42Mb	80Mb	120Mb	213Mb
A530 COMBO HARD DRIVE & ACCELERATOR	£699 INC VAT Ref: HAR 0962	£799 INC VAT Ref: HAR 0968	£899 INC VAT Ref: HAR 0974	£999 INC VAT Ref: HAR 0983

PC EMULATOR

PLUG-IN OPTION FOR HD8+ & A530

- 16MHz 80286 processor
- 287 Maths Co-Processor socket
- 512K of PC RAM plus the use of Amiga RAM
- Supports Hercules, CGA, EGA/VGA (monochrome) and T3100 video modes
- Runs MS-DOS (3.2 and upwards) plus thousands of other PC programs



This powerful 286 emulator module simply plugs into the 'mini-slot' of the GVP HD8+ or A530 (without invalidating the warranty). It has full access to the Amiga's resources and allows you to run PC and Amiga programs at the same time, giving you two computers in one.

£149 Ref: EMU 0500

ALL PRICES INCLUDE VAT - DELIVERY IS FREE OF CHARGE IN THE UK MAINLAND

140193-1430

SILICA SYSTEMS OFFER YOU

- *FREE OVERNIGHT DELIVERY:* On all hardware orders shipped in the UK mainland.
- *TECHNICAL SUPPORT HELPLINE:* Team of technical experts at your service.
- *PRICE MATCH:* We normally match competitors on a "Same product - Same price" basis.
- *ESTABLISHED 14 YEARS:* Proven track record in professional computer sales.
- *£12 MILLION TURNOVER (with 60 staff):* Solid, reliable and profitable.
- *BUSINESS + EDUCATION + GOVERNMENT:* Volume discounts available **081-308 0888.**
- *SHOWROOMS:* Demonstration and training facilities at our London & Sidcup branches.
- *THE FULL STOCK RANGE:* All of your requirements from one supplier.
- *FREE CATALOGUES:* Will be mailed to you with offers + software and peripheral details.
- *PAYMENT:* Major credit cards, cash, cheque or monthly terms.

Before you decide when to buy your new Amiga products, we suggest you think very carefully about WHERE you buy them. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and software, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE 081-309 1111

SILICA SYSTEMS

MAIL ORDER: Order Lines Open: Mon-Sat 9.00am-6.00pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX. No Late Night Opening	**Tel: 081-309 1111** Fax No: 081-308 0608
LONDON SHOP: Opening Hours: Mon-Sat 9.30am-6.00pm	52 Tottenham Court Road, London, W1P 0BA. No Late Night Opening	**Tel: 071-580 4000** Fax No: 071-323 4737
LONDON SHOP: Opening Hours: Mon-Fri 9.30am-7.00pm (Sat close 6.30pm)	Selfridges (Basement Arena), Oxford Street, London, W1A 1AB. Late Night: Thursday - 8pm	**Tel: 071-629 1234** Extension: 3914
SIDCUP SHOP: Opening Hours: Mon-Sat 9.00am-5.30pm	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX. Late Night: Friday - 7pm	**Tel: 081-302 8811** Fax No: 081-309 0017
ESSEX SHOP: Opening Hours: Mon-Fri 9.30am-5.30pm (Sat 9.00am-6.00pm)	Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA. No Late Night Opening	**Tel: 0702 468039** Fax No: 0702 462363

To: Silica Systems, CMUSR-0493-68, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A BROCHURE ON THE GVP RANGE

Mr/Mrs/Miss/Ms: .... Initials: .... Surname: ....

Company Name (if applicable): ....

Address: ....

....

.... Postcode: ....

Tel (Home): .... Tel (Work): ....

Which computer(s), if any, do you own? 68K

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

LATE NIGHT HO



Brrrrr. Bleep bleep bleep-ity-bleep. Whine whine whine. Are these sounds familiar? If they're not, maybe you should be considering buying yourself a Modem. If they're starting to be, let John Armitage show you how to get the best from your comms software.

It's late at night, but the hard drive is still whirring. Listen to the sweet howl as the modem changes pitch, thrill as the Carrier Detect LED suddenly burns red and whoop with delight as the system finally locks onto that host system which has been engaged for hours. Suddenly your computer is not alone – it's linked to the world. This is what Comms is all about.

Unfortunately, using the telephone network is not free, in fact it's not even particularly cheap. If you want to save money you need to restrict your time spent 'on-line', but that doesn't necessarily mean you have to make fewer calls. Instead, it means knowing your Comms software inside out, and making use of its money saving options.

NCOMM

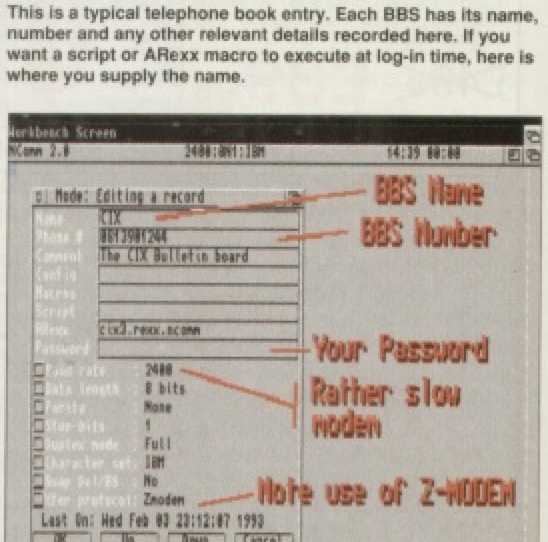
One of the best pieces of Comms software available is *NComm v2*, written by Torkel Lodberg and Daniel Bloch. *NComm* is shareware, which means if you like it and use it regularly, you should send some money to the programmers. In return, you'll receive a specially registered copy which will remove the annoying little requestors which occasionally pop up. Full details are supplied in the documentation which comes on disk.

To get your copy, flick through the ads in CU Amiga to find your local PD library. Send off a cheque for a few quid, and within days you'll get a disk through your letter box.

NComm can at first appear more than a little daunting, with more menus and requestors than you can shake a very large stick at, but getting it going is really easy. Simply connect your modem, switch on the computer and boot with the Workbench and then pop in the *NComm* disk. Find and double click on the *NComm* icon, and you're in business.

Probably the easiest way to see if a Comms program and modem are talking to each other is to enter a few AT commands by hand. The AT commands are part of the control language that practically every modem can accept and understand. For example, ATz will reset the modem to its default condition. If you type it on the keyboard, you should see the letter echoed back to the screen. The RX and TX lights should flash briefly on the modem, and when you press return you

This is a typical telephone book entry. Each BBS has its name, number and any other relevant details recorded here. If you want a script or ARexx macro to execute at log-in time, here is where you supply the name.



ORROR

still
the
arrier
op with
hat host
rs.
's linked to
ut.
twork is
cheap. If
trict your
essarily
ead, it
side out,
ons.

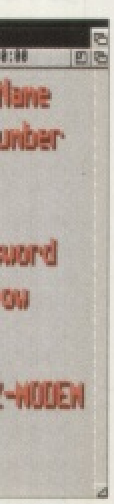
re avail-
lberg and
ch means
uld send
rn, you'll
n will
ich occa-
in the

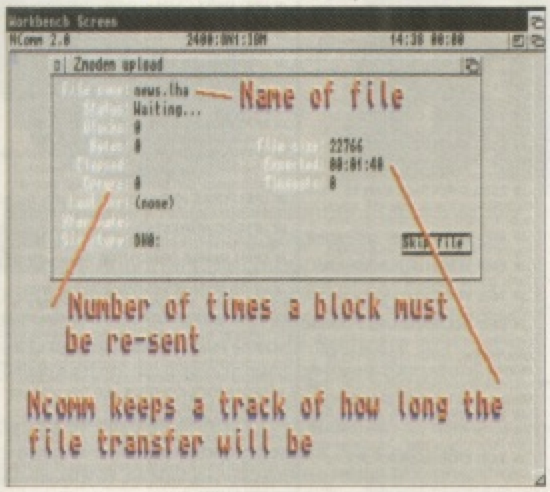
s in CU
off a
ou'll get a

a little
rs than
etting it
r modem,
e
disk. Find
d you're in

Comms
other is to
AT com-
hat
under-
odem to
keyboard,
the
h briefly
rn you

as its name,
re. If you
time, here is





NComm about to start a Z-MODEM transfer. This is all you see on-screen, as the data is sent directly from your computer to the modem. Z-MODEM will make sure no errors occur, and give you an estimate as to how long the process will take.

should see 'OK' appear.

If this doesn't happen, check the following:

1. Is the modem switched on?
2. Is the cable properly connected?
3. Has another program running on the Amiga – such as a MIDI sequencer – taken over the serial port?
4. Is the baud rate set correctly?

To discover if it is the baud rate which is causing your troubles, you'll need to find the menu in *NComm* called 'COM'. The first sub-menu is called 'BAUD RATE', and when you move the pointer onto it you'll see all the possible rates displayed. If a sensible rate – say 2400 – isn't selected, set one. The default baud rate is taken from the one set in your Workbench Pref's serial drawer. Set this if you want the modem to work correctly every time you reset.

LET YOUR MODEM DO THE WALKING

Another of those AT-commands mentioned is ATD, which is the code for dialling. Most modems can operate with both tone and pulse dialling exchanges. If you were to type ATDT the modem would use tones, which are faster but require a modern local exchange. If this is unsuitable, ADTP will suffice.

Typing ATDT12345 – and replacing the '12345' with your own telephone number – should hopefully result in your modem calling your own house. As you would expect, this should be engaged. If you don't hear the engaged tone, or your software doesn't report back there may be a problem with the connection between the modem and the telephone wall socket.

Having to type in numbers by hand in this way can be a real pain, so in common with most software, *NComm* has a telephone book option. The name, number and any special information relating to the system to be called are entered. Subsequent calls can be made by selecting the BBS by name from a menu. You must remember to save the telephone book information before you leave the program, or your details will be lost. If the filename is called NCOMM.phone, *NComm* will automatically load the phone data when the program is first run.]

INFORMATION EXCHANGE

The main purpose of any Comms program is to transfer information. There are two main ways of doing this: using text and using binary. When you first log onto a BBS, the text appearing on-screen and the text you type (name, password and so on) is transferred as plain ASCII text. Likewise when you enter a message, the text is sent character by character.

Sending text by this method is extremely inefficient, unless you can type between 240 and 960 letters a second. A better way is to prepare your text files beforehand, and save them until you log in. All comms programs have a text send and text receive option. To send a prepared text file from within *NComm*, use the Start ASCII Send option from the Transfer menu. A requestor will appear for you to select your text file, and once you do it will be sent at a much higher speed than you could normally type.

The Start ASCII Capture option will do the inverse – it will remember all the text that has been received, and store it on disk. In this way you can review all the bumph that has been sent your way when you nipped out to the bathroom.

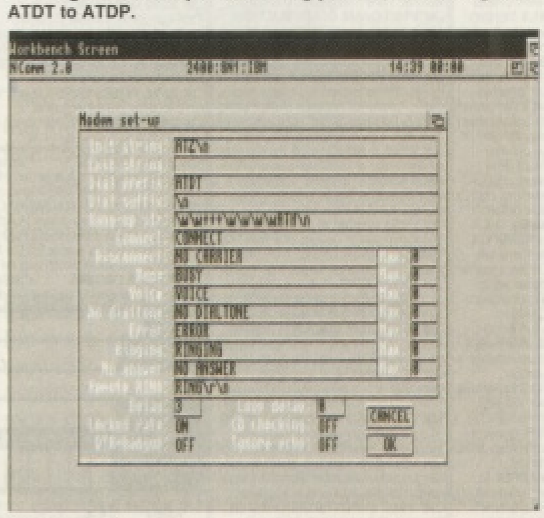
BIN IT

The second method of data transfer is to use binary information. Instead of the visible character set of letters and numbers, binary files are pure byte values. Since this is exactly the same way that programs, pictures and sound samples are stored this is the method used to send all-non readable information.

There are several protocols of data transfer available, and they are given the exciting names of X-MODEM, Y-MODEM and Z-MODEM. Other protocols such as Kermit are still used and loved by some, but most file transfers use Z-MODEM. This is rather intelligent protocol, which can alter the packet size of data (how large the 'chunks' are) depending on prevailing line noise. If Z-MODEM file transfer is interrupted, the Comms program can usually re-start from when it left off. This can save a lot of time if you accidentally kick the telephone cable from the wall, or someone picks up an extension phone and whistles into it.

With its Auto-download feature, *NComm* will automatically trigger a download when necessary. For

The modem set-up screen from *NComm*. Most of the default settings won't require alteration, although if your local exchange won't accept tone dialling you'll need to change the ATDT to ATDP.



JARGON BUSTERS

- *Kermit* – A file protocol still used by PC users and in links with large computer systems at universities..
- *Modem* – The hardware which connects your computer's serial port to the telephone line. Most have several flashy lights so you don't think you wasted your money on a very dull box..
- *X-MODEM, Y-MODEM, Z-MODEM* – Binary file transfer protocols. Z-MODEM is the best.

JARGON BUSTERS

example, within a BBS you may want to download a new demo file, so you select [F] from the BBS menu. *NComm* recognises the data sent by the BBS, and automatically starts the Z-MODEM download into the correct drawer on your disk – in RAM: if necessary.

Basically, you should try to use Z-MODEM whenever you can, as it works out quite a bit faster than the others. If a BBS doesn't support Z-MODEM, ask them why not.

ERROR

All binary protocols have one thing in common – they can detect errors. It is essential that a program is received exactly as it was sent, for although you can probably guess that 'HELPO WQRLD' started life as 'HELLO WORLD', if the same degree of corruption occurred to a program it would crash instantly when run.

The protocols use check sums to ensure that the previous block of data has no errors. If there is a mistake, the block is resent. In this way the data arrives with 100% accuracy at the other end of the telephone line, even if it has had to make several attempts in the process.

NComm will list the number of errors which have occurred during a transfer, along with a constantly updated estimation of the length of the transfer. To re-iterate, the number of errors does not mean that the file has become corrupt, rather that a number of blocks have had to be resent.

SQUEEZE

How do you reduce the amount of time it takes to send a binary file? If you were to send a full disk of programs using a modem operating at 2400 baud, it would take over an hour – even assuming a perfectly clear line.

The first way to reduce time is to squash the files before they are sent. An archiving program such as ZIP, ZOO, LHA or LHZ will reduce a file to a fraction of its size.

If you need to send an entire disk, rather than just a few files, you can use a disk masher program to archive the contents of the disk into one file. This file can be transferred in the usual way, but whoever receives it needs a copy of the masher program to reproduce the disk.

The second way to save time is to buy a faster modem. Most sysops will scoff openly at you if you use a 2400 baud modem, and send ridicule laden messages if you use anything slower.

A 2400 baud modem can be bought new for about £80, but if possible try to find the extra cash to buy a 9600 or faster. For about £250, you can buy a modem which will send an entire (unsquashed) disk in about 10 minutes. If you plan on using it a lot, this saving will soon appear on your 'phone bill.

NEXT MONTH

John Armitage will return with a look at off-line readers. Plus, a couple of in-depth reviews of existing bulletin boards.

C FOR BEGINNERS

Let John Kennedy show you the way to programming heaven, in part five of his amazing C tutorial series.

PART 5

Especially when using higher than assembly level programming languages such as C, the importance of program design can be greater than the actual programming. One aspect of design which is becoming more important, as typified in the field of Software Engineering, is the concept of Data Structures.

By spending time right at the start of the design process selecting the manner in which a program will store and process information, much effort at the programming stage will be saved. Programs become easier to understand, which can only help the writing and debugging processes.

This month we'll take an introductory look at the facilities provided by C to enable the programmer to develop a structured outlook on problems. We'll start with rather simple arrays and move on to higher dimensions. Soon we'll be looking at ways of defining your own custom structures, and also ways of making them into arrays.

ARRAYS

When you grasp the benefits of using loops to perform a task rather than simply repeating the individual instructions, the concept of arrays always follows fairly easily.

Instead of declaring a variable to hold only one item of the desired type, it is possible to declare the variable to store a complete list, of which each element is independently accessible.

Here's an example which should clarify that rather vague statement. Imagine that a database program must store 10 telephone numbers. The numbers are to be stored as integers, and not contain any spaces or brackets – just pure numbers.

We could declare the variables as in TABLE 1.

There is nothing wrong with this approach – it works fine, and in some instances it may even be advantageous to use it. However, if the list was to be expanded to hold 100 numbers the program would quickly become full of assigns and tests. When disk filing and printing facilities need to be added, the program becomes ludicrously large. As you can probably predict, there is a much easier way to do things.

TABLE 1

```
/* Example 1 – Telephone numbers */

main()
{

int number1 = 123456;

int number2 = 234567;

int number3 = 345678;

/* etc */

int number10 = 987654;
}
```

Instead of declaring 10 (or 100) separate variables, we can combine them all into one multi-part variable, called an array. TABLE 2 contains a good example.

TABLE 2

```
/* Example 2 – Telephone numbers 2 */

main()
{

int numbers[100];
}
```

Believe it or not, but this example actually reserves enough space for up to 100 different numbers. To access them separately, you include a number within square brackets after the name, as in TABLE 3.

As always there is a trick, and the trick is this: when accessing the individual elements of the array, you must remember to start with element number zero. In the example in TABLE 3, the number in the square brackets – called the index – must be in the range 0 to 99. If you forget and access element number 100 (which doesn't exist) you could conceivably crash your program.

TABLE 3

```
/* Example 3 – Assigning array elements */

main()
{

int numbers[100];


/* assign some numbers at random */

numbers[0] = 122456;

numbers[10] = 123456;

numbers[56] = 133456;

numbers[45] = 122456;

numbers[80] = 133436;

numbers[99] = 123443;
}
```

Of course, using the indexing method provided by arrays opens the way to using loops and loop counters to save a lot of work.

Take a look at the program in TABLE 4 – it prints out the 100 'phone numbers, all with one printf() function call.

You may need to revise the section we covered in the February issue on loops if you have forgotten how 'for()' works.

HIGHER DIMENSIONS

For more complicated programs, it may be necessary to increase the number of indices used to access the array. In effect, we can add more and more dimensions to our array to store more and more data, as sometimes we don't need more storage, just a better way of accessing it.

For example, in a chess program it usually needs to store an internal copy of the board. Each square on the board can be represented as an integer, each storing the type of playing piece which can be placed there. We could theoretically use an array like the one we defined to store telephone numbers:

TABLE 4

```
/* Example 4 – Loops and Arrays */

main()
{

int numbers[100];

int counter;


/* assume the elements are assigned in here */


for (counter=0;counter<100;counter++)

{

printf("Number:%d is %d\n",counter,numbers[counter]);

}


}
```

```
int board[64];
/* there are sixty four squares */
```

However, it helps visualisation and later coding if we use a two dimensional array like this:

```
int board[8][8];
/* there are still sixty four squares */
```

The second definition uses exactly the same amount of memory as the first, but it is probably easier to visualize the second as eight rows of eight columns – just like a chess board. That's the key to successful programming, make your data structures as realistic as possible.

THE MEANING OF LIFE

Now, as an exercise in real life programming, let's take a look at a program that was popular several years ago, well before colour graphics and Mandelbrot Sets were invented. It's called the Game of Life, and it was first produced in the 1970s by a chap called John Conway, who wanted to model living cells.

His program uses a grid of cells, each of which can be alive or dead. From one generation to the next, whether or not a cell is born, lives or dies is determined by some simple rules:

1. A cell remains alive if it is not-overcrowded (it has no more than three neighbours) and not too lonely (less than two neighbours).
2. A cell will be born if it is surrounded by three parent cells.

These rules weren't made up on the spur of the moment, but were decided upon after much work. Other rules can be applied, but these seem to give the most interesting results.

The program stores the state of the various cells

in an array called Grid. This array is actually three-dimensional, in that not only does it have rows and columns, but it has depth in the form of two layers. These layers are needed to implement the rules, for each cell is influenced by its neighbours over the entire layer simultaneously. If we used only one layer, and changed a cell according to its neighbours, then the neighbours of the changed cell wouldn't be influenced correctly. Therefore two grids are needed, and these are indexed by the constants GRID1 and GRID2 in association with two variables, X and Y, to look at each cell in turn.

HIGH DEFINITION

But hold on, what's this #define stuff? More magic spells – as if that #include gibberish wasn't bad enough... But *Don't Panic* – the #define is there for your benefit. It's just like a word processor's find-and-replace feature, in that anywhere GRID_ONE appears in the program, it is replaced with a 0. Likewise SIZEY is replaced by 20 and SIZEX is replace by 40. These substitutions are made before compilation even begins, by a special part of the C compiler called the 'pre-processor'. As these instructions are not part of the C language, no semi-colons are needed to separate them – they must be placed one per line. Although not compulsory, it is the usual custom to use capitals with defines to make them stand out from normal variables. The Amiga's library files make extensive use of defines – sometimes called Macros – to simplify programs and add many advanced features.

Using macro definitions of 'constants' like the size of the grid makes tinkering with the program a lot easier. If you want to make the life grid bigger or smaller, you need only alter the numbers following SIZEY and SIZEX – there is no need to hunt through the program looking for all the numbers that need changed.

HOW IT WORKS

Now we have seen how the data structures work, it's time for the main program. Only three functions are needed: Init_Grid() (to set up the initial pattern of cells), Display_Grid() (to draw the cells on-screen) and Calculate_Grid() (to perform the life and death decisions).

After an initial call to Init_Grid(), a small loop in the main() function calls Display_Grid() and Calculate_Grid() repeatedly. If you key the program to run more than 10 times, alter the value in the for() loop.

Init_Grid() uses a random number generator to decide upon the initial state of the grid. Depending on your C compiler, you may need to alter this line, so check your documentation. I've used the version of Random which comes with SAS/Lattice C v6. If the worst comes to the worst you might have to set individual cells with 'Grid[GRID_TWO][x][y]=1'. Why 1? Within this program, a 1 means that a cell is alive, a zero means it is dead. This makes counting up the number of neighbours easy to do – as long as you remember to subtract the middle cell. The two 'i' and 'j' loops scan the cells on either side of the cell at x,y making up a total, but in the course of this scan they will also include the cell at x,y. If it is alive, it must be removed from the total. Since if it is dead it will contain a value of zero, we can subtract it any way on the off-chance.

After counting the neighbours, all we need to do is apply the two rules – one for birth and one for death. The line previous to these rules ensures the default condition is for the cell to survive to the next generation.

TRICKY BITS

OK, let's have a look at some parts of the listing which could be construed as 'tricky'. We've already looked at the technique used to count up the number of neighbours belonging to a cell, but the decisions that follow may look a little complicated.

The birth test is really quite simple, and doesn't even require special kits from the chemist. If a cell is currently dead but the total number of its neighbours is three, then a cell will be born in the next generation. Remember we use the double equals sign for testing, and the single equals sign for assignment.

The second test is in two parts, and it's all to do with the round brackets. For the first condition to be met, the cell must be currently alive. However, if either the number of neighbours exceeds 3, OR if it is less than 2 the second condition is met. If both the first and second conditions are true (because there is an AND), the cell dies in the next generation.

In this function, extensive use of C shortcuts are used: ++, += and -=. As you'll know: X++ is the same as X=X+1, X+=2 is the same as X=X+2 and X-=2 is the same as X=X-2.

ENHANCEMENTS

When you start playing with this program, you'll soon find a need to be able to accurately determine the initial cell pattern. Probably the easiest way to do this is with a program to read in an external grid of cells. Which will lead us expertly into file handling – the subject of next month's tutorial.

NEXT MONTH

Next month in your soaring, sizzling C tutorial – the joys of file handling, including how to save everything from ASCII text and in tegers to whole arrays.

ARRAYS

* Arrays are variables which can store many similar types of data under one name. For example, int ages[20];
* To access the contents of the array, you need to add an index value. For example, ages[1]=25;
* Arrays can have as many dimensions as required, although it is quite difficult to visualise dimensions higher than 3! For example, ChessBoard[8][8] is OK, but Hypercube[4][4][4][4] is tricky.

LISTING

```
/*************************************/
/* LIFE – THE COMPUTER GAME
*/
/*************************************/

#include <stdio.h>
#include <stdlib.h>

/* The size of the grid – change it for
bigger or smaller universes */

#define SIZEX 40
#define SIZEY 20
#define GRID_ONE 0
#define GRID_TWO 1

/****** Global variables ******/

int Grid[2][SIZEX][SIZEY];
int gen;

void Calculate_Grid(void)
{             /****** Calculate new Life
Grid ******/
    int x,y,i,j,total;

    for (y=1;y<(SIZEY-1);y++)
        for (x=1;x<(SIZEX-1);x++)
        {
            total=0;
            for (i=-1;i<2;i++)
            {
                for (j=-1;j<2;j++)
                {

total+=Grid[GRID_ONE][x+i][y+j];
                }
            }

            total-
=Grid[GRID_ONE][x][y];


Grid[GRID_TWO][x][y]=Grid[GRID_
ONE][x][y];

            /* Test for birth */
            if
((Grid[GRID_ONE][x][y]==0) &&
(total==3))
                Grid[GRID_TWO][x][y]=1;

            /* Test for death */
            if
((Grid[GRID_ONE][x][y]==1) &&
((total>3) || (total<2)))
                Grid[GRID_TWO][x][y]=0;
        }
}


void Init_Grid(void)
{ /****** Initialise Grid ******/

    int x,y;

    /* Set generation counter to 1 */
    gen=1;

    /* Set all grid cells to be dead */
    for (y=0;y<SIZEY;y++)
        for (x=0;x<SIZEX;x++)

Grid[GRID_TWO][x][y]=0;

    /* Set some cells to be alive */
    for (y=1;y<(SIZEY-1);y++)
        for (x=1;x<(SIZEX-1);x++)
            if
(rand()>1873741824)
Grid[GRID_TWO][x][y]=1;
}

void Display_Grid(void)
{ /****** Display Life Grid ******/

    int x,y;

printf("\f\nGeneration:%d\n\n",gen);
    for (y=0;y<SIZEY;y++)
    {
        for (x=0;x<SIZEX;x++)
        {
            /* update grid with new
values */

Grid[GRID_ONE][x][y]=Grid[GRID_
TWO][x][y];
            if
(Grid[GRID_ONE][x][y]==1)
                printf("O");
            else
                printf(".");
        }
        printf("\n");
    }
    gen++; /* update my generation
*/
}


/*********** Main program
***************/

main()
{
    int count;
    Init_Grid();
    for (count=0;count<10;count++)
    { /* Repeat process 10 times */
        Display_Grid();
        Calculate_Grid();
    }
}

/**************** END ***************/
```

ADVERTISERS INDEX

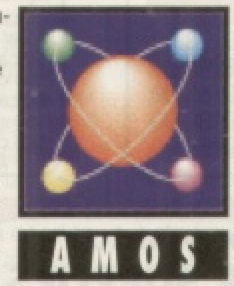
So you wanna be a games programmer, eh? In conjunction with this month's coverdisk, we're starting a new column to help you get the most out of AMOS! Dave Smithson shows you how.

PART 1

GAMES PROGRAMMING MADE EASY

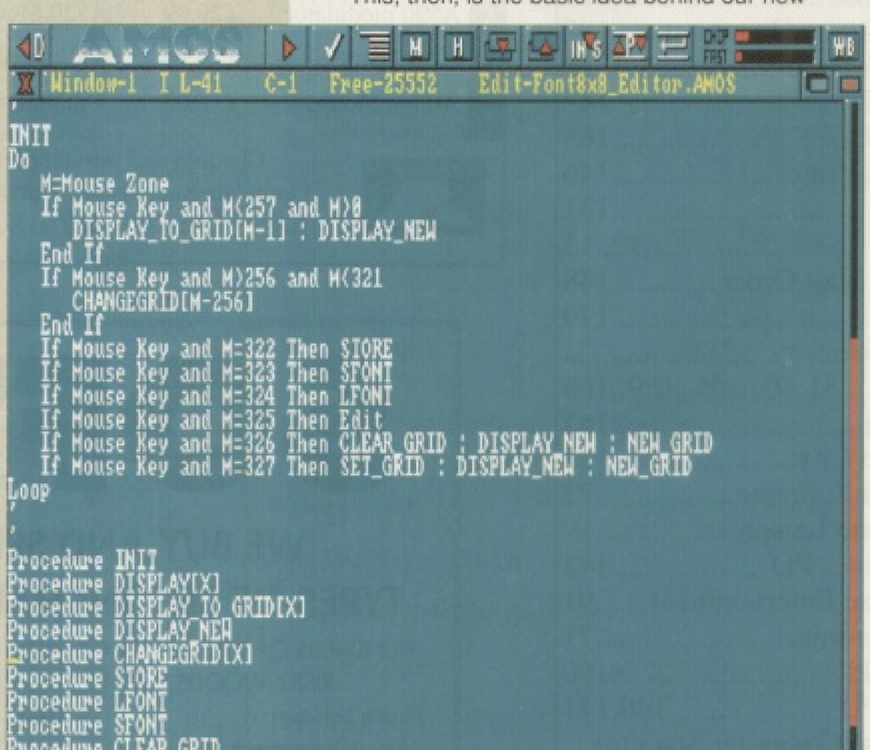


Most of us have dreamt of becoming games programmers at some time or another. From the sidelines, the life of the games programmer seems understandably attractive – fuelled by images of fame, fortune, fast cars and the thought of getting paid to sit infront of an Amiga all day seems just too good to be true. Unless you know where to start though, actually writing a game is a totally different ball game altogether.



Europress' AMOS is certainly a step in the right direction. Since its launch way back in 1990, AMOS has given the rest of us the tools to bring to life those game ideas that have been pent up inside for years. Programming the Amiga's hardware from assembler language is not a pastime for the faint-hearted, but AMOS takes away all that heart ache by providing a comprehensive selection of commands and functions that makes the nitty gritty of writing games childsplay. No longer do you need to understand minterms, copper lists and interrupts in order to write your own games. Because AMOS takes away all this drudgery, all you need is a few good ideas and a working knowledge of how games tick. With these foundations laid, you're well on your way to writing that blockbuster game that will shoot you to stardom.

This, then, is the basic idea behind our new AMOS column. We're not going to bore you with the basics of AMOS programming – if you want to gen up on that sort of thing, then watch out for our 32-page AMOS supplement. If, on the other hand, you want raw facts with no waffle, state of the art source code and a few pointers here and there, then you've come to the right place. Over the coming months we'll be taking you step-by-step through everything you need to know in order to write games.



If you want to program games but assembler reduces you to a quivering wreck, then AMOS is the answer.

POLISHED PERFORMER

Sounds good so far, but even now I can see that a few of you are starting to tremble at the thought of coding games, but it's really not as painful as you may expect. Although games may seem to be terribly complex beasts that require the programmer to have a degree in just about everything just to get a sprite to appear on the screen, most games are actually not that complex once you understand how they work. Yes, even you could be a games programmer once you're armed with the right knowledge. A word of advice though – don't try to run before you can walk. Although we'd all love to write a game that would turn David Braben green with envy, writing a game is like driving a car – although the theory is pretty much the same no matter what type of car you drive, putting a learner behind the wheel of a Lotus Esprit would be lethal! Start by writing simple games and then work up to the more complex genres once you feel confident enough.

Over the next few months we'll be taking a look at how arcade games work. In particular, we'll be writing our own *PacMan* clone complete with hoardes of nasty blobs, power pills and gameplay galore. It's always worth picking a game that has been around for a long time, because the standards of computer technology have improved so much over the years, you can bet that most of the early games were actually pretty simple because the programmers that wrote them didn't have a lot of computer power to work with! *Defender* is, perhaps, a more complex example, but games such as *Space Invaders*, *PacMan* and *Pong* are perfect material for polishing up your programming prowess.

TOOLS OF THE TRADE

So, what do you need to program games in AMOS? Well, obviously, you already own two of the most important tools of the trade, namely a copy of AMOS and your Amiga, but you'd be well advised to invest in the following items.

THE GOOD GAMES PROGRAMMING GUIDE

Europress went to great lengths to ensure that AMOS made games programming as simple as possible, but not all these 'niceties' work in our favour. In fact, some of them are such a pain that we actually need to take a few steps backwards in order to get a game up and running at a decent rate. Like a 'real' games programmer dumps the Amiga's operating system out of the window, the AMOS games programmer should also dump certain aspects of AMOS in order to get the very best from the language. These measures are necessary in order to keep the game running smoothly and in sync. Here's a quick guide to the three main culprits that should be put under the axe.

Double Buffering – No, we still need to use double buffering in order to ensure that screens scroll smoothly and Bobs are flicker free, but the first thing you should turn off is AMOS' automatic screen swapping facility. As you will know, under normal circumstances AMOS handles the task of swapping betwen the physical and logical screens automatically which is ok if you're writing a simple demo, but it can be a real pain when writing games. Instead, we want to be able to swap the screens ourself when (and only when) the entire main game loop has been executed.

AMOS provides us with two commands which make this very easy to achieve – AutoBack 0 and Screen Swap. AutoBack 0 should be put at the start of your game and it basically instructs AMOS that we want automatic screen swapping turned off. The Screen Swap command is then used within the main game loop to perform this screen swapping manually.

Object Updating – Just like Double Buffering, AMOS usually handles the task of redrawing sprites and bobs automatically. Although this is very nice of AMOS to make the effort of doing the hard work for us, it has the unavoidable side effect of slowing down a game because each sprite or bob is redrawn immediately. To keep things running as fast as possible, we need to be able to redraw all the sprites and bobs at once. If we allow AMOS to redraw our sprites and bobs automatically, the main game loop will be slowed down considerably.



AMAL programs run at speeds nearing that of true assembler, making them ideal for handling tasks such as sprite control, screen scrolling, etc.

AMAL – Yes, AMAL is a wonderful thing, but it too should be kept firmly under control by running all AMAL programs as part of the main game loop instead of running them under interrupt. Don't worry, this doesn't slow the main game loop down a great deal – because AMAL code is far more compact and efficient than standard AMOS code, the difference between running AMAL programs in manual mode and interrupt mode is hardly noticeable. Not only that, but we also get alot more AMAL channels to play around with in manual mode – 49 extra channels, to be precise!

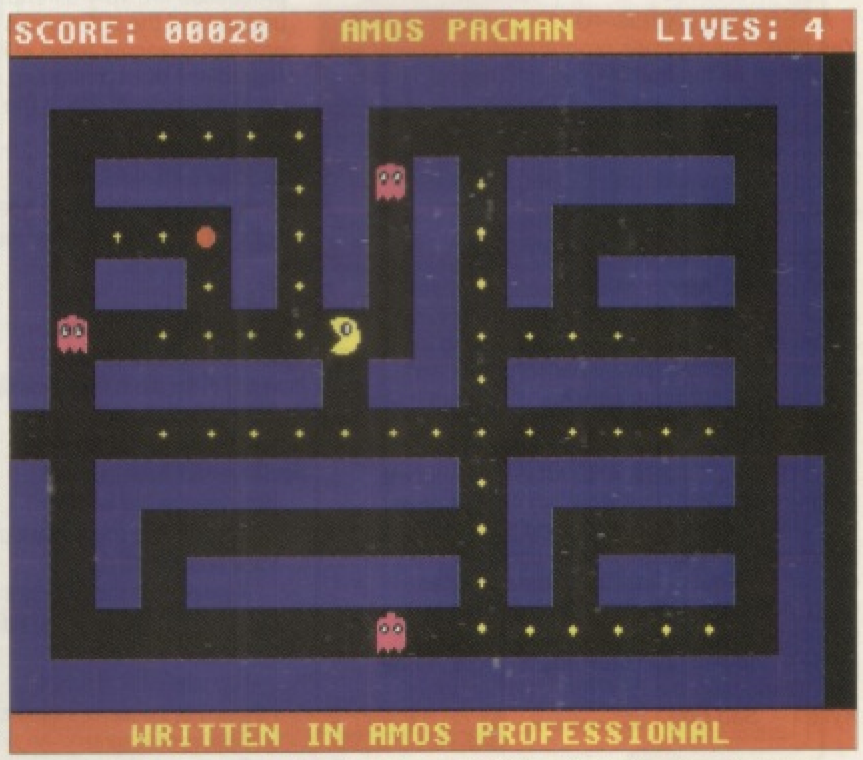
● AMOS PROFESSIONAL – Although both AMOS 1.35 (the latest release) and Easy AMOS are very good, it's well worth the cost to upgrade to AMOS Professional. Although we don't really need such things as its Interface language for games programming, AMOS Professional's editor is a far slicker affair that can considerably increase your work efficiency. You also get a much better sprite editor and Easy AMOS owners really do need AMAL. And no, Europress aren't paying me to say that!

● THE AMOS COMPILER – Even if your code is hyper-efficient, you can bet that it'll still be a bit sluggish if you run it in interpreted mode. Running it through the AMOS Compiler will not only speed up your code considerably, but it'll also hide your valuable source code from prying eyes. Although Europress still haven't released a compiler for AMOS Pro, the standard AMOS Compiler will do the job just as well providing you don't start using such things as Interlace and IFF animation. Don't worry about buying an old product either – Europress assure me that they will allow existing Compiler owners to upgrade to the AMOS Pro Compiler once it has been released.

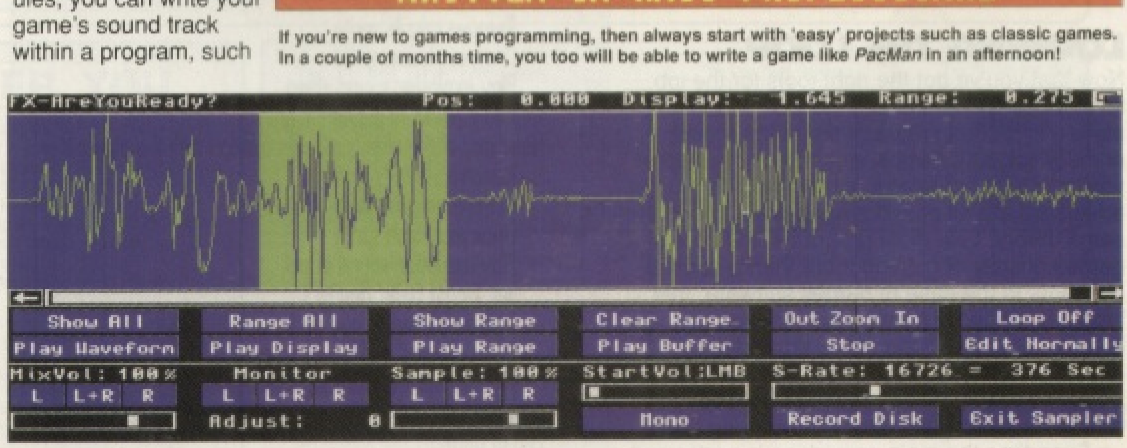
● A PAINT PROGRAM – Although the AMOS Sprite Editor is a pretty capable character (especially the new AMOS Professional Sprite Editor), it's worth getting your hands on a paint program such as *Deluxe Paint*, for drawing background graphics, title pages and even sprites. I tend to draw all my game sprites in *DPaint* and then import them into the AMOS Sprite Editor once they're complete, simply because DPaint provides a better range of painting tools.

● A SOUND SAMPLER – A sound sampler is a definite must if you're programming games. Even if your game is the most playable thing since Mac *Tetris* (Mac owners will know what I mean!), it's an unfortunate fact of life that a game is often judged on the quality of its graphics and sound effects. Although we've got the graphics aspect covered with *DPaint*, your game won't be half as impressive if you start using the standard AMOS 'Shoot' and 'Bang' commands for your sound effects. With a sound sampler, you'll be able to grab weird and wonderful sounds from your favourite 50's B-movies and then use them within your games (be careful of copyright restrictions though!).

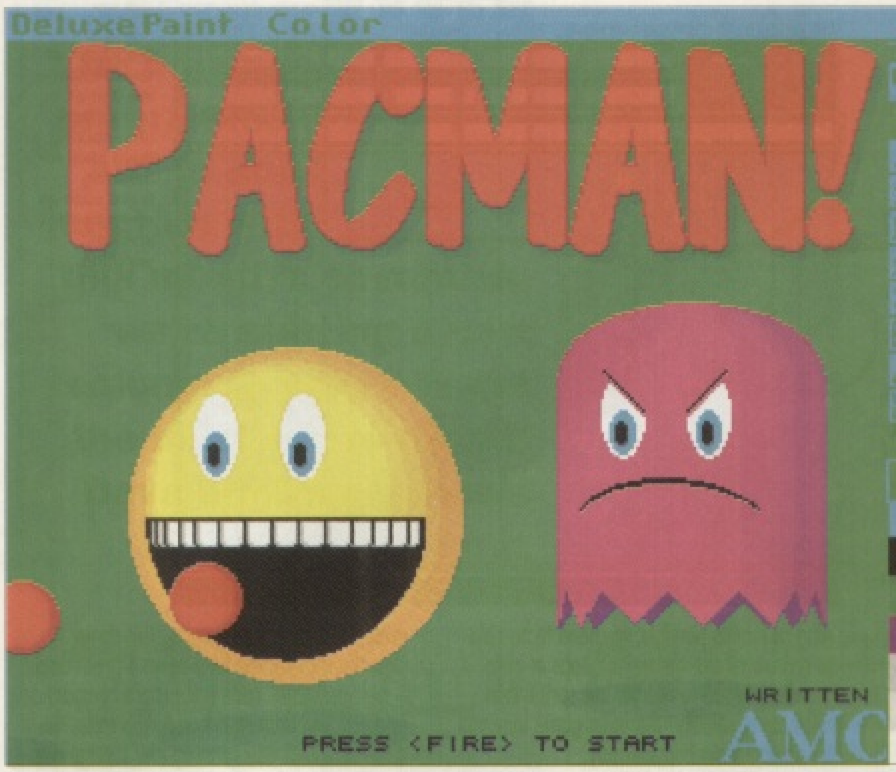
● A SOUND TRACKER – These are available ten a penny in the PD libraries these days, so you shouldn't have much trouble getting your hands on a decent 'tracker clone. Now that AMOS has direct support for *Sound Tracker* modules, you can write your game's sound track within a program, such



If you're new to games programming, then always start with 'easy' projects such as classic games. In a couple of months time, you too will be able to write a game like *PacMan* in an afternoon!



A sound sampler such as MicroDeal's AMAS is a worthwhile investment if you're serious about your games programming.



Although the AMOS Sprite Designer is a pretty powerful beast, a decent paint package such as *DPaint* is a neccessity for both sprite design and other graphics work.



Games can really tax even AMOS, so the AMOS Compiler is a recommended purchase to inject that extra spurt of speed.

as *ProTracker*, and then port it directly into your program! I personally use a commercial 'tracker called 'AudioSculpture', but you can use any 'tracker you can find (they're all pretty much the same!).

● A PEN AND PAPER – Uh? A pen and paper? Yes folks, even games programmers need ancient tools such as the humble pen and paper! These indispensable items are just the ticket for designing sprites and for drafting out routines before committing them to code. Planning code is all important, so always have a pen and paper handy.

● LOTS OF MEMORY – If you're still using a 1Mb (or less) Amiga, then I strongly recommend that you get some extra memory (2Mbs at the very least). Once you start pulling in lots of colourful sprites, pretty backgrounds and sonically superb sound tracks, your source files will start to get pretty big...

● LOTS OF COFFEE AND MUSIC – Games programming is thirsty work, so always have the kettle topped up and a good supply of coffee at hand. As for the music, opinions are divided on what is best for games programming. Although Jeff Minter prefers Thin Lizzy, I personally recommend a copy of Depeche Mode's 'Violator' and their latest single, 'I Feel You' (especially the remixes!). [*What about Kylie? – Sad Ed.*]

LOOPING THE LOOP

Now that you've got the right tools for the job, let's get stuck into the serious task of getting started in games programming. First though, some theory. All games, regardless of whether you're coding a platform game, shoot 'em up or adventure are all based around pretty much the same theory. Like most programs, the core of a game consists of nothing more than a continuous loop. In the case of games software, this loop has a special name – the main game loop. If you're ever sat in the pub surrounded by games programmers and they start talking about the speed of their main game loop, you'll now know exactly what they're referring to!

Everytime the main game loop is performed, every aspect of the game is either checked or updated. If, for example, you were writing a *Space Invaders* clone, your main game loop might loop something like the example below. As you can see, the main game loop consists of basically two actions – decisions and processes. Decisions and processes are very different and it is important to understand the differences between them. When a process is encountered, it is performed everytime regardless of what it going on within the game. A good example of this is the process of moving onscreen sprites. Aggressive aliens don't like to stay still, so their positions will be updated everytime the main game loop is performed.

PSEUDOCODE

The following is an example of the type of decisions and processes a typical code should contain and how they are structured:

```
Start of Loop
  Update positions of all aliens
  Update positions of all missiles
  Have any of the aliens fired a missile?
    Generate missile sprite
    Play missile fired sample
  Has the joystick been touched?
    Has it been moved left?
      Move player's ship left by x pixels
    Has it been moved right?
      Move player's ship right by x pixels
    Has the fire button been pressed?
      Generate missile sprite
      Play missiled fired sample
    Have any of the player's missiles collided with aliens?
      Remove alien sprite
      Remove missile sprite
      Draw explosion sprite
      Play explosion sound effect
      Add x points to player's score
    Have any of the alien's missiles collided with the player?
      Remove player's sprite
      Remove missile sprite
      Draw explosion sprite
      Play explosion sound effect
      Set 'Game Over' flag to 1
      Redraw all sprites and background
      Swap physical and logical screens
      Wait for vertical blanking interrupt
    Jump to Start unless 'Game Over' flag = 1
    End of game!
```

JARGON BUSTERS

● *Compiler* – A program which converts source code written in a computer language into object code for direct execution by the computer. Compiled code is faster than any interpreted language.

● *Loop* – A repetitive part of the program which is repeated until some condition is met. A loop inside a loop is known as a nested loop.

● *Sprites* – A graphic element which is manipulated as a block by the program. Hardware sprites are overlaid onto the graphics at the end, rather like a genlock.

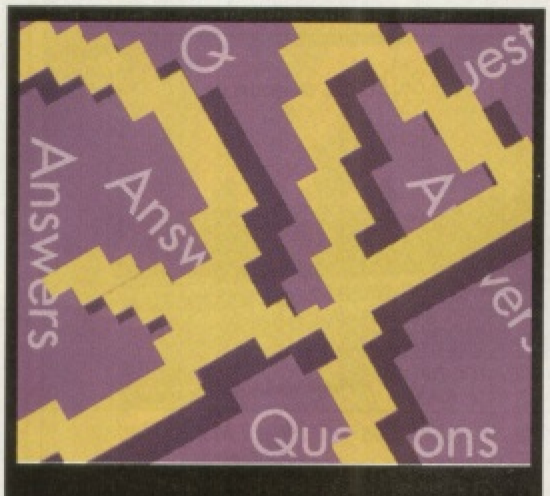
● *Source code* – This is the code as written by you, before being translated for the computer. This is the only file that you will need in most cases, but compilers produce another file, called object code, which is the executable version.

Decisions, on the other hand, are made in order to establish whether certain sections of code should be performed. Take the firing of a missile, for example. Obviously you only want a missile to be fired when the player presses the fire button, so the first thing you would do is to check whether the fire button had been pressed. If, after checking the firebutton, you find that it hasn't been pressed, then there's little point in running the code that handles this particular aspect of the game.

As you may have already realised, there are a lot of steps within the main game loop that may not always be executed. If the results of any of the decisions made within the loop are found to be false (a missile hasn't collided with a ship, for example), then huge chunks of code will not be executed. Splitting up your code in this way not only makes it considerably easier to understand, but it can also make your game run faster. As we shall see over the coming months, speed is always of the essence, so we should take advantage of every opportunity that we get to save valuable processor time. Although this isn't particularly important when programming in assembler (even sloppy assembly programs run fast!), AMOS isn't quite so rapid so it is possible to slow even the simplest of games down if your code is inefficient.

NEXT MONTH

In the upcoming issue Dave Smithson will cover the first part of the actual source code for our AMOS version of *Pacman*. All the info you need to draw the screen, blocks and icons will be right here in glorious CU Vision.



Scissors in hand, Mat Broomfield is here to unravel another batch of readers' problems. Whatever the question he has the answer.

NEW OWNER, SAME OLD PROBLEMS

I own an A600 and I have quite a decent collection of cover disk games and utilities which I would like to condense, thus freeing some of the disks for other use. I just can't manage to get them from one disk onto another. I've spent hours trying to perform this task using my wits and the reference manual. Also, how come when I'm using Workbench and set the clock(s), the time is lost when I switch off, forcing me to reset them each time I load up?

Finally, using the Workbench and the manual I've tried to set up a series of accounts using the drawer and file system. I managed to open new drawers and name them, but what on earth do you put in them? In the book it shows file icons and text, but no description of how to input them.

I realise that these questions may seem pretty pathetic, but I'm fast becoming disillusioned. As a games machine, the A600 is second to none, but as an interactive educational medium it's bloody frustrating!

Phil Noonan, Brookvale, Runcorn

It's all too easy to develop misconceptions and get confused when learning to use a computer. However, I think that the biggest problem that you, and many people like you, seem to have, is your expectation of the computer's manuals. To draw an analogy, when you buy a new car, the instructions that come with it don't teach you how to drive, nor do they tell you how to modify it to run on methane gas, or how to convert it into a hovercraft! Why then, do people expect the Amiga manuals to teach them how to become programmers, or how to perform every task they've ever dreamed of? They're basic operating manuals designed to show you the most rudimentary functions of the computer.

I really can't over-emphasise the importance of buying some good tutorial books to expand your knowledge. Better yet, join a club or watch a friend who knows what he's doing.

Compiling disks can be one of the hardest things to do, especially for a beginner. Even magazines employ professionals to do the job for them. However, you may be able to give it a go, but I have no intention of going into great detail in this column. To give you a clue about where to start, look up how to use the following instructions: MAKEDIR, COPY, DUPLICATE, CD. You'll also need to know how to use the Shell, how to use a text editor, how to create a start-up sequence, and how to load or create a script file. *Mastering Amiga Beginners* and *Mastering AmigaDOS Volume 1*, both from Bruce Smith Books, will make a good starting point, but you can say goodbye to £40 if you buy both! Contact BSB at Smug Oak Green Business Centre, Lye Lane, Bricket Wood, Herts, AL2 3UG. Tel: 0923 894366.

It's not enough simply to set the clock, you also have to save the time that you set. The Amiga has two clocks: the system clock (which you have presumably set) and the battery backed clock (which you haven't). Once you've set the system clock, you need to open the Shell window and type Setclock Save <return> to transfer your system time to the battery backed clock.

Mind you, if you have a 1.3/1.2 Amiga, it's possible that you don't even have a battery backed clock (which would be on your trapdoor expansion board if you do have one).

As for your question about setting up accounts, you seem to have completely misunderstood the whole purpose of files and drawers. Think of a drawer as being equivalent to a drawer in a filing cabinet. It has no information value on its own, it is simply a data receptacle. A file is like a specific document inside a filing cabinet. You don't buy a filing cabinet full of pre-written documents, and you don't create a drawer full of pre-written files. If you create a picture with *Deluxe Paint*, or write a letter with a word processor, you can save the results in one of your drawers. Regardless of the type of information, your saves are all stored as files, although you can (and should) give each file a unique name if you like.

To create a file, you obviously need a piece of software that lets you create and save whatever it is you want. You mentioned accounts, and I don't know if that was simply a generic term, or if you're genuinely interested in accounts. If the latter applies, you'll have to buy an accounting or spreadsheet program before you can set up any accounts.

SLOW-WRITE SAVER

After seeing the review of *Quickwrite* in the June edition of your mag, I purchased it for general home use. The system is quick and easy to use except when I want to save a document. Each time I try, I get the message 'Volume Quickwrite Full' followed by DOS error 221.

What am I doing wrong? I've read all the manuals without success. I have a Workbench 1.3 1Mb A500 with no extra disk drive.

How do I save documents on an extra disk?

John Thompsett, Witham, Essex

Gasp, shock, horror! You're not trying to save onto your original *Quickwrite* disk are you?

Trying to save to your original program disk is a definite no, no. Not only do you expose your valuable program to the risk of virus infection, you also risk damaging it if there's a power cut while you are saving. You should copy the original disk (if possible), then put it away safely and only use the duplicate. Both duplicate and original disks should remain write-protected unless you're told otherwise by the program's instruction manual.

The message you're getting is telling you that the *Quickwrite* program disk is full. To save to another disk, you'll first need to format a blank one. You can do this from Workbench using the INITIALISE or FORMAT options in the menu at the top of the screen. Refer to your Workbench manual for exact details on how to do this. Having formatted a disk use the RENAME option to call it Quicksaves (for example). When you select SAVE AS from *Quickwrite's Project* menu, a requester will open up allowing you to specify exactly where you want to save your document. At the bottom of this requester is a small text gadget labelled 'Save document as:'. Click in this requester using the left mouse button, then type Quicksaves: (if that's what you called your blank disk), then press return. Please note that the colon (:) after the title denotes that you are referring to a disk. The program will ask you to insert Quicksaves in any drive, so remove the *Quickwrite* program disk and insert your blank. The program will read the contents of the disk (Trashcan), and display them in the file window. Click back in the text requester and type the name that you want to give your file. This time when you press return, your file will be saved.

Loading a file involves the same process, except that when the contents of your saves disk are displayed in the file window, you can load the file you want by simply double clicking on its name in the file window.

CD ROM MUSINGS

I'm an A600 owner and am keen to get a CD-Rom drive for my computer. My father has raised a few questions on the features and price of the CDTV and the CD-ROM drive for the Amiga, and I was wondering if you could set the record straight once and for all?

1.I read in a magazine that the A570 is £400 and in another it's £350. What is the real price?
2. When is the A670 for the A600 due out?
3. Will Commodore make the A670 photo-CD compatible, and if not, why not?
4. Are Commodore likely to enhance the A670 in the not too distant future?
5. Is it possible to produce an identical version of the *Street Fighter* coin-op on the CDTV?
6. Finally, could you persuade my father that buying an A670 is a good idea in one reasonably short paragraph.

I hope that the answers to the above questions will clear up some confusion, and convince some people to go out and buy one.

David Waites, Stainland, West Yorkshire

1. You can buy an A570 for £329.99 from Gordon Harwoods. Mind you, they can flog you a standalone CDTV for a very reasonable £379.99! Call them on 0773 836781.
2. Commodore said that it would be out in time for Christmas! (That's last Christmas! –Ho, ho.)
3. The A570 is CDG (Compact Disc with Graphics) compatible, but that doesn't mean it will work with Photo CD. Although these disks can be read, the technology hasn't been licensed from Kodak by CBM.
4. As is their style, Commodore are constantly upgrading their hardware, and rumours of an upgraded CDTV are already rife. I can't be more specific, because I don't know.
5. No, I very much doubt it, but you can get

very close. I don't know the exact specs of the coin up, but I suspect it has more than four channels of sound, and animating those big sprites at a decent speed might cause problems. Anyway, who said the game was coming out on CD ROM?

6. Mr Waites, CDTV is rubbish, a waste of money, bad for David's education, he'll be in prison within six months! Nah, just kidding, CD-ROM is a great idea, which has yet to be fully exploited. The value of the system is measured by the quality of its software, and in that regard it's being rather let down at the moment, but with Commodore's Christmas sales, and the recent price cuts, we could finally see a major upturn in the quality of software. Its strongest feature is probably its educational and family entertainment value. If you're considering the system, you should look very seriously at the CDTV (as opposed to the ROM drive).

DRIVE INSTALLATION

I've recently bought *Ishar*, and I'm disgusted to discover that it doesn't install to hard drive. Why is it that serious games such as this don't provide for hard-drive installation, especially when their PC counterparts do? Is there any way around the problem?

David Burton, Jeddah, Saudi Arabia

I agree with you, it really annoys me when I pay good money for a strategy game only to discover that it won't install on hard drive. Other notable examples are *Heimdall* (which comes on five disks and swaps between three of them almost non-stop), *Powermonger* and *Utopia*.

I asked Gremlin why *Utopia* wasn't installable, and they said that it was to prevent piracy – a lame excuse. I can install *Pro Page*, and that costs five times as much! And anyway, *Populous 2* installs, it just uses manual-based protection instead.

There's now a new type of pirate whose sole purpose is to crack games so that they'll install on a hard drive. Come on software companies, piracy is 10 times as serious in the PC world, yet they get to load their stuff from hard drive!

CHIPPY CHAPPY

In the 'Memory Adaptations' article in your June issue, you mention a wire linked to the Gary chip. I've looked but I can't find it. Do you need this to connect Gary to Evesham Micros' Megaboard? I own a 1.3 Amiga.

G. Tickner, Llancarfan, South Glamorgan

The wire is part of the modification that you can perform to upgrade a 1.3 Amiga from half a meg to 1Mb of Chip RAM. The wire isn't attached to the computer when you buy it, you have to add it yourself if you want to perform the upgrade. Its absence won't affect the efficiency of the Megaboard.

SCATTY SCART?

I noticed in September's Q&A that in reply to M. Abernethy's letter regarding SCART leads, you said that they don't all conform to a single standard.

I recently bought a LINXS lead to connect my Amiga to my Fidelity television. Whenever I use the computer the screen is about two inches over to the left. I've tried using Workbench to re-centre the picture and I've looked inside the TV to see if there was some sort of centring control, to no avail.

So do I have the incorrect lead, or does the lead need the 'Jungle chip' that you mentioned?

Jonathan Storey, Eighton Banks, Tyne and Wear

The jungle chip I referred to is not a separate component; you either get a SCART lead that has one, or you don't. In my experience they have only improved the display when it was either not there at all, or much too dark. My instincts suggest that your problem is not due to the type of lead you're using, but to something else, although I'm blowed if I know what. Anyone else able to help?

MIDI MASTER AND SERVANT

A couple of months ago a reader wrote in asking about the possibility of linking two Amigas together via MIDI interfaces so that one could act as a 'slave' to the other, thus doubling the number of sample channels available for his compositions. At the time, you suggested that it was probably possible, but asked if anyone had already done it.

I have performed the operation, using *OctaMED*. There's no trouble connecting the two Amigas. All you have to do is ensure that the computer which is to be the 'slave' has the external sync setting activated in *OctaMED*. This will then allow the controlling computer to start both programs playing simultaneously.

Gavin McKenzie, Preston, Lancs

Thanks a lot Gavin. See, easy as pie!

CG FONT UPDATE

I own *Professional Page 3*, and I have been using the *Font Manager* program supplied with it to convert a number of Adobe typefaces into Compugraphic format. At first everything went fine, with *Professional Page*'s font list being updated automatically as I converted each font. However, now that my CG fonts directory contains several hundred files, *Font Manager* no longer seems to update *Pro Page*'s font list, so I can't access the fonts from the program. I've tried using the CG Update program, but to no avail.

I'm also experiencing another problem which may possibly be related. At first *Font Manager* seemed to convert every font I threw at it, but now it occasionally freezes halfway through a conversion without completing the required processes. No matter how long I leave the program for, the computer remains permanently 'locked up'.

Marcus Little, Cambridge

I contacted Gold Disk about this, and they reluctantly admitted that there were restrictions with many versions of Font Manager, not least of which being the fact that it will only update a CG Fonts directory containing less than 255 fonts (750+ files). I encountered similar problems at a much lower figure than that. Fortunately, there is a simple solution.

In the 'S' directory you will find a file called fontlist.pp which is used to tell *Professional Page* exactly which fonts are available in the CG Fonts directory. All you need do to add the offending fonts is load the fontlist.pp file into a text editor such as Ed or Cygnus, and add the names of the missing fonts.

This solution will also work for *Professional Draw*, except that the *Pro Draw* font file is called Fontlist.pd

As for your problem with the program locking up, there are two likely causes:

1. The font has too many elements. Compugraphic fonts may only have a certain number of composite parts and if you try to convert a font which exceeds that number you'll either get a faulty conversion, or no conversion at all.

2. The font is not of the correct type. At the moment *Font Manager* only converts Adobe Type 1 fonts. However, this is far less likely as the program is almost certain to identify fonts of the wrong format before it even tries to convert them.

AMSTRAD DMP 2160

Four years ago in my Spectrum days I treated myself to an Amstrad DMP 1260 printer which worked fine with it. I recently tried using it on my Amiga and was happy with the results using most word processors, *Sonix* and *IntroCAD*, but was disappointed when it came to *D-Paint*. All it prints are question marks and numbers. Could you please tell me what the correct DIP switch settings are for *D-Paint*, and which printer driver is needed?

Doug Loveridge, Haverhill, Suffolk

Before I answer your main question, I must just point out that you don't generally use different drivers for different programs, i.e. Epson for *D-Paint*, NEC for word processing, etc. Once you've set up the correct driver, you can use exactly the same one for virtually every program you use. Printing graphics is one of the hardest things you can ask a driver to do, so when setting up your printer, always try to get it working with *D-Paint*, then you can be confident that it'll work with everything else.

Anyway, your answer comes to you thanks to R.Woodward and Tim Natrajan who sent in information about their printer set-ups last May, thanks guys.

First the DIP Switches:

Bank 1		Bank 2	
off	on	off	on
1	3	1	5
2	8	2	6
4	3	9	
5	4		
6	7		
7	8		
10			

According to both readers, you should use an Epson-X (old) driver.

WHICH WORD PROCESSOR?

I have become the new owner of an A600, Commodore 1084ST monitor and a Star LC-20 Multifont printer which I purchased as a family Christmas present.

Although I can type, I am a computer beginner. I want to use the Amiga as a word processor to replace my 16 year-old electric typewriter. Can you recommend any particular software titles?

Where is the best place to buy the software,

and which is the best title on the market today for the A600?
Mike Nobbs, Carisbrooke Park, I.O.W

Opinions vary greatly on which is the best Amiga word processor, but my two personal favourites are *Word Perfect* (a text only 'professional' package retailing for about £200) and *Wordworth* (a word publisher which handles graphics as well). As you mention that you can touch type, perhaps graphics support is not important to you, in which case *Word Perfect* is the tops. However, there is a plethora of cheaper alternatives such as *Prowrite*, *Quickwrite*, *Scribble* and *InterWord*. If you feel that graphics support might be useful, then *Wordworth* or *Final Copy II* are both popular. As you have a multi-font printer, you'll especially appreciate *InterWord* or *Wordworth*, both of which allow you to use a variety of printer fonts in a single document.

There are many good stores and mail order companies who will be happy to sell you the software. If you want to push me for a recommendation, I've always been very happy with Gordon Harwoods Computing. Phone them on 0773 836781.

FULL WORKBENCH DISK

Thanks for the latest version of *Virus Checker* which I've installed on my Workbench 2.0 disk. Unfortunately, there's now no space left on the disk. I've deleted the format and diskcopy icons, but that only gives me an extra 5K. Is it possible to tell Workbench to search another disk in DF1: for the files it requires to automatically execute during boot up? Alternatively, could you please tell me what additional files I can safely delete from my Workbench 2.0 disk?

My second point is in reference to an article in the November issue of your organ about the A4000 having 16.8 million colours. My point is, if the human eye can't detect the difference between these colours, how do we know that Commodore aren't lying about their existence? Who would know if they kept a couple of colours for themselves without telling anyone?!
Ray James, Ammanford, Dyfed

There are two ways that you can make a program look elsewhere for files that it needs to execute a script. The first way is to assign the disks or directories that they would usually read to a different disk. For example, to assign the entire Workbench disk to one called 'Files' the following line will work:

Assign Workbench2.0: Files:

A different solution is simply to use the complete path name for every program you execute, i.e.

Files:More Workbench:textfile

This example would load More from your Files disk and then load a file called textfile into it from the Workbench disk.

Whichever method you use, the computer will ask for the appropriate disks as it needs them. It's very hard to say what you can delete from your Workbench disk, without knowing what you use it for. However, good places to look for extraneous files are the utilities and C directories.

As for your point about the A4000's colour palette, whilst it's true that you can't tell the difference between adjacent colours in the colour palette (i.e. Red 255 – Green 255 – Blue 255 (white) and R254 – G255 – B255 (almost white!)), you can often tell when such a colour is absent. For example, imagine a sky which graduates from light to dark blue; if one of the colours in the graduation is missing, it's often quite noticeable, especially when dealing with large areas of colour.

DIY BUSINESS

I'd like to reply to Mr D. Shrimpton's letter that appeared in the February issue concerning the setting up of PD libraries. He wanted to set up his own library, but you warned him how difficult the climate is for such companies. I have an idea which Mr Shrimpton or some other readers may be interested in. The basic theme is a company that specialises in old software. In Swansea – and I expect it's the same all over the country – unless you want a popular new game, or an equally popular budget release, you can't get your hands on anything. Since last summer I've been trying to get hold of *Nebulous 2*, but I've had no luck despite the fact that the game's barely 18 months old.

I'm certain that there's a consistent market for this sort of thing, although sales will never be big. Just because a game's old doesn't mean it's not any good or won't sell any more.
Slim, Swansea, S. Wales

Of course you're right, there is a substantial market for back-catalogue games, but then that's what budget labels are for. Most of the major software houses have their own budget labels through which they sell their own and other publishers' older titles. Of course, the big problem in setting up such a venture is that you need a fair amount of capital to start – exactly what most of us don't have!

TOO MUCH MEMORY?

I own an A500 with 2Mb of internal RAM. I'm having problems loading and playing certain software. *Zool* appears to load until it reaches the screen telling the player to press fire, then it software fails. I've tried on my colleague's 1Mb computer and it worked perfectly. I've also tried switching off the expansion RAM (reducing the machine to half a meg) but the game requires at least 1Mb to work.

I considered installing a boot-block memory controller but I realise that doing so would probably wipe some important data from the disk, and even if it did work, would probably reduce my memory too much.

I also find that *Knights of the Sky* slows down considerably using 2Mb of memory.

Please can you help as I don't want to keep taking these games round to my colleague's house to play them, and I don't really want to return them to the shop I bought them from.
S. J. Hanley, Walsall, West Midlands

I don't know what your problem is, but it's certainly not too much memory. I've loaded and played *Zool* on my 5Mb 1.3 A500 (with half a meg of chip RAM) and my 10Mb A500+ (with 2Mb of Chip RAM), and it works perfectly in both cases. Perhaps your drive is damaged or out of alignment, causing loading problems that only manifest themselves at that particular point.

I can't comment on the speed reduction for *Knights of the Sky*, but I do seem to vaguely remember someone else commenting on a similar problem. Anyone got any suggestions?

GIZZA JOB MR SOFTWARE HOUSE

I have had my Amiga for over two years now and read CU Amiga all the time. Having recently obtained a degree in computing, I'm finding it difficult to get a job. I'm very interested in writing games and I'm learning to program AMOS and hope to progress to 68000 assembly language. I would like to work for one of the big software houses that produce games for the Amiga, but I don't know the addresses to write to. Could you please print a list of software houses to contact?
A. Bains, London

A lot of the software houses are just begging for decent staff, especially programmers and graphic artists.

Learning AMOS isn't good practice for learning assembly language. If that's your objective, drop AMOS now, and get an assembler and a teach-yourself book. There's nothing wrong with AMOS but the two languages are about as different as English and Chinese.

Perhaps you should use a little initiative and look up the software house's addresses from any of the ads that they run in this very mag.

RAM OR DRIVE

I own an A500+, an Action Replay Mark III and a Citizen Swift 24e printer. I am faced with a dilemma as to which piece of hardware to buy. There are two possibilities: an external drive or a 1Mb RAM expansion. My main objective is to make my DTP, word processors and other applications faster. Can you please enlighten me and give me your personal recommendations?

If you think that I should buy both, which should I buy first considering that there will be a two or three month gap between them? Will either of them make things faster when programming in C, Pascal or AMOS? Can you please tell me where I can buy the public domain BBC emulator?
Stephen Peters, Burry Port, Dyfed

My first instinct is always to say take the memory first. An external drive makes loading programs easier, but it takes up some of your precious memory. Furthermore, there are some programs that you can't even load without the extra RAM, but there's nothing (except PD demos) that demands an extra drive.

You can often cache DOS applications in RAM to speed them up, and this is particularly true of the applications you've mentioned.

I think that you should buy both as you're using so much serious software. I always recommend Cumana drives. As for RAM, if you can possibly afford it, have you considered one of the external boards such as the Supra RAM? They're more expensive to start with, but you can add extra RAM to them.

I didn't know that there was a PD BBC emulator. Anyone know differently?

NEXT MONTH

I look forward to receiving more letters from you, but please remember that I never enter into personal correspondence so there's no point in enclosing SAEs. Also, some answers take me a while to find out so if you don't see a reply this month, keep looking. Send your questions to: Mat Broomfield, Q&A, CU Amiga, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU.

SOFTWARE CITY

P.O. BOX NO.888 Wolverhampton WV1 1TP

CALL US ON : 24 HOUR CREDIT CARD HOTLINE 0902 25304

VISA

Registered Office: I.J.A. Software Limited 2nd Floor Offices Hampton Walk Queens Street Wolverhampton WV1 1TQ

Access

AMIGA GAMES

GAME		PRICE
1st Division Manager		7.99
3-D Construction Kit 2		34.99
A-Train	(New)	24.99
Addams Family		17.99
Air Force Commander	(New)	21.50
Alien 3	(New)	21.50
Alen Breed '92		9.99
Another World		17.99
Arcade Fruit Machine		7.99
Arsenal Computer Game	(New)	17.99
Battle Squadron	(NewPrice)	7.99
Battlehawks 1942		14.99
Beast 3		21.50
Biff	(New)	7.99
Bignose The Caveman		7.99
Body Blows	(New)	17.99
Bridge Player 2150		21.50
Bubble Dizzy		7.99
Campaign		21.50
Captain Dynamo		7.99
Captive	(New Price)	14.99
Carl Lewis Challenge		17.99
Carnage		7.99
Carrier Command	(New Price)	9.99
Championship Manager		17.99
Chaos Engine	(New)	17.99
Chessmaster 2100	(New Price)	14.99
Chuck Rock	(New Price)	12.99
Civilisation		24.99
Cohort 2	(New)	21.50
Colossus Bridge 4	(New)	17.99
C.J. In the U.S.A		7.99
Creepers	(New)	21.50
Cricket Captain	(Sp Offer)	9.99
Curse Of Enchantia		24.99
Daily Double Horse Racing		7.99
Dalek Attack		14.99
Darkmere	(New)	21.50
Dark Seed		24.99
Deluxe Strip Poker 2(1Meg)	(SPOffer)	7.99
Dizzy Prince of The Yolk folk		7.99
Doc Croc Outrageous	(New)	7.99
Dragon'sLair 3		24.99
Dreadnoughts		24.99
Dungeon Master/Chaos Strikes Back		21.50
Emlyn Hughes Int Soccer		7.99
Euro Soccer	(New)	17.99
European Super League		9.99
Exile	(Sp Offer)	9.99
Exodus 3010	(New)	21.50
Eye Of The Beholder 2 (1 meg)		24.99
F16 Combat Pilot		9.99
Falcon		14.99
Falcon Op CounterStrike (Data Disk)		9.99
Falcon Operation Firefight (Data Disc)		9.99
Fire & Ice		17.99
Fireforce		17.99
Flight of theIntruder		14.99
Floor 13		21.50
Football Director 2		9.99
Formula 1 Grand Prix (Microprose)		24.99
Free D.C	(New)	18.99
Frontline (C.C.S.)		17.99
Future Wars	(New Price)	12.99
Fuzzball	(NewPrice)	7.99
Galatic Warrior Rats	(New)	9.99
Games Espana '92		21.50
Gazza's Super Soccer	(New Price)	9.99
Golden Axe		9.99
Graham Taylor's Soccer		17.99
Grand Prix (Microprose)		24.99
Hagar The Horrible	(New)	17.99
Hand of St James	(New)	21.50
Harlequin	(Sp Offer)	9.99
Harpoon Version 1.21		24.99
Harpoon Battleset 3 or 4		10.99
Hudson Hawk	(New Price)	7.99
Hero Quest	(New Price)	9.99
History Line 1914-1918	(New)	7.99
Humans + Data Disc		21.50
Ian Bothams Cricket		21.50
Indiana Jones Fate Of Atlantis (Action)		17.99
Indiana Jones Fate Of Atlantis (Adv.)		25.99
Indiana Jones Last Crusade (Adventure)		14.99
International Rugby Challenge	(New)	17.99
Italia 1990		9.99
Jack Nicklaus Golf	(New Price)	7.99
Jack Nicklaus Unlimited Courses(1 meg)		21.50
Jack Nicklaus Unlimited Clip Art		10.99
Jack Nicklaus Vol 2 or 4 or 5		10.99
James Pond		7.99
Joe and Mac Caveman Ninja		17.99
John Madden's American Football		17.99
Jones In The Fast Lane	(New)	24.99

GAME		PRICE
Kaiser	(New)	17.99
Kind words 3		34.99
Kings Quest 5		27.99
Kryandia		24.99
Last Ninja 3	(New Price)	9.99
Legends Of Valour		25.99
Leisure Suit Larry 5		24.99
Lemmings& + LemmingsData Disc		21.50
Lemmings 2	(New)	21.50
Lethal Weapon		17.99
Life And Death	(New Price)	14.99
Links (requires Hard Disc Drive		24.99
Links Firestone (HD)		12.99
Lombard R.A.C Rally		7.99
Lotus Espirit		9.9
Man United		9.99
The Manager		21.50
Match of The Day		17.99
Mega Fortress		21.50
Microprose Golf		24.99
Midnight Resistance		7.99
Monkey Island		17.99
Monkey Island 2 (Le Chucks Revenge)		25.99
New Zealand Story		7.99
Nick Faldo'sChampionship Golf (New)		17.99
Nigel Mansell's World Championship		21.50
Nigel Mansell's World Championship (A1200)		21.50
No Greater Glory (US Gold/SSI		24.99
No Second Prize	(New)	17.99
Oh No More Lemmings(Stand Alone)		17.99
Omar Sharifs Bridge		24.99
Oriental Games	(NewPrice)	9.99
P.G.A Tour Golf		17.99
P.G.A. courses Data Disc		10.99
P.G.A. Golf + Courses Disc		21.50
Paperboy 2	(Sp Offer)	7.99
Perfect General		24.99
Perfect General Data Disc		14.99
Pictionary	(New Price)	7.99
Pinball Fantasies		21.50
Pinball Magic	(New Price)	9.99
Pipemania	(New Price)	9.99
Piracy		21.50
Pitfighter	(New Price)	7.99
Pool (Archer Mcleans)		17.99
Populous		9.99
Populous / Sim City		21.50
Populous 2 (1/2 or 1 meg)		21.50
Postman Pat 3		7.99
Prehistorik	(New Price)	9.99
Premier Manager		17.99
Premiere		21.50
Prince Of Persia	(New Price)	7.99
Putty		17.99
Railroad Tycoon		24.99
Rainbow Islands		7.99
RBI Baseball 2	(New Price)	7.99
Road Rash		17.99
Robin Hood Legend Of Quest		7.99
Robocop 2	(New Price)	7.99
Rome A.D. '92	(New)	21.50
RVF Honda	(New Price)	9.99
Secret Of Monkey Island (1 Meg) 1		7.99
Secret Pf Monkey Island 2 (1 Meg)		25.99
Sensible Soccer 92/93 (New Version)		17.99
Shadoworlds		17.99
Shoe People	(New Price)	7.99
Shoot 'Em Up Construction Kit		9.99
Shuttle		21.50
Silent Service 2		24.99
Sim City / Populous		21.50
Sim City/Terrain Editor/Arch1	(New)	24.99
Sim City Architecture 1		11.99
Sim City Architecture 2		11.99
Sim Earth		24.99
Simpsons-Bart versus The World	(New)	21.50
Sleepwalker(A500+, A600 orA1200)		17.99
Space Crusade + Data Disc		17.99
Special Forces	(New Price)	18.99
Spellbound Dizzy		7.99
Stalingrad (C.C.S.)		17.99
Starglider 2	(New Price)	9.99
Steve Davis Snooker		9.99
Streetfighter	(New Price)	9.99
Street Fighter 2		18.99
Striker Manager	(Sp Offer)	3.99
Super Cars 2		9.99
Super Barbarian	(New)	17.99
Super Cauldron	(New)	17.99
Super Hero	(New)	21.50
Super Monaco G.P		9.99
Sword Of Honour	(New)	17.99
Tag Wrestling		7.99
Terminator 2	(New Price)	7.99

GAME		PRICE
Thomas The Tank Engine		7.99
Tracon 2 (Air Traffic Controller)		24.99
Trivial Pursuit	(New Price)	7.99
Trolls		17.99
Turrican 1 or 2		7.99
Turtles 2	(Sp Offer)	12.99
TV Sports Football(Not + Compatible)		3.99
Ultima 6		21.50
Ultimate Golf		9.99
Universial Monsters	(New)	17.99
Valhalla	(New)	21.50
Video Kid	(New Price)	9.99
Warriors of Releyne	(New)	21.50
Waxworks		24.99
Ween		21.50
Wing Commander		24.99
Wizkid		17.99
World Championship Boxing Manager		7.99
World Class Leaderboard (LTD Edition)		9.99
World Class Rugby	(Special Offer)	9.99
World Cricket		7.99
W.W.F. 2(European Rampage)		17.99
Zak McKracken	(New Price)	12.99
Zool(A500+, A600 or A1200)		17.99

EDUCATIONAL SOFTWARE

ADI English (11-12 or 12-13)	17.99
ADI Maths (11-12 or 12-13)	17.99
Better Maths (12-16) (School Soft)	17.99
Better Spelling (8-14) (School Soft)	17.99
Fun School 2 (U6 or 6-8 Or 8+)	7.99
Fun School 4 (U5 or 5-7 or 7-11)	17.99
Junior Typist (5-10) (School Soft)	14.99
Magic Maths (4-8) (School Soft)	17.99
Maths Mania (8-12) (School Soft)	17.99
Paint 'n' Create	17.99
Playdays (BBC)(New)	17.99
Spelling Fair	17.99
The Three Bears (5-10) (School Soft)	17.99

3.5" Double Sided, Double Density With Labels:-

1	0.59
10	5.50
25	12.50
40 Piece 3.5 Disc Box	6.99
80 Piece 3.5 Disc Box	7.99
120 Piece 3.5 Disc Box	9.99
MOUSE MAT	2.99
AMIGA A500 DUST COVER	9.99
AMIGA A600 DUST COVER	9.99
AMIGA 1/2 MEG EXPANSION WITH OR WITHOUT CLOCK	29.99
AMIGA A600 1 MEG EXPANSION WITH CLOCK	59.99
AMIGA A500+ 1 MEGABYTE EXPANSION	44.99

AMIGA COMPILATIONS

☆ SPORTS MASTERS ☆
P.G.A Tour Golf,Indianapolis 500, Advantage Tennis & Euro Championship
£21.50

☆ AIR AND SEA SUPREMACY ☆
Silent Service, Gunship, Wings, Carrier Command & P47 Thunderbolt
£21.50

☆ SUPERFIGHTER ☆
Pitfighter, WWF Wrestling & Final Fight
£17.99

☆ DIZZY COLLECTION ☆
Fast Food, Kwik Snax, Magicland Dizzy, Fantasy World Dizzy & Treasure Island Dizzy.
£17.99

☆ DIZZY'S EXCELLENT ADVENTURE ☆
Spellbound Dizzy, Bubble Dizzy, Dizzy Prince of the Yolk Folk, Panic Dizzy & Kwik Snax
£17.99

☆ THE DREAM TEAM ☆
The Simpsons, WWF Wrestlemania & Terminator 2
£17.99

☆ FANTASTIC WORLDS ☆
Realms, Pirates, Wonderland, Populous & Mega-Lo-Mania
£24.99

☆ STRATEGY MASTERS ☆
Populous, Spirit Of Excalibur, Chess Player 2150, Hunter & Battle Master
£22.99

☆ SUPER ALLSTARS ☆
Steg, C.J. In The U.S.A., Captain Dynamo, Adventures Of Robin Hood & Magicland Dizzy
£17.99

QUATTRO POWER
Grand Prix, Pro Power Boat, Violator & Nitro Boost Challenge
£24.99

☆ THE R.T. SMITHCOMPENDIUM ☆
Vulcan, Ancient Battles & Arnhem
£19.99

THE GREATEST
Jimmy White's Snooker, Dune & Lure of The Temptress
£24.99

ORDER FORM AND INFORMATION

All orders sent FIRST CLASS subject to availability. Just fill in the coupon and send it to SOFTWARE CITY,P.O. Box 888 Wolverhampton, WV1 1TP

ORDER FORM

NAME: ....

ADDRESS....................

POSTCODE.................... TEL NO:....................

Name of Game	Computer	Value

Postage	
TOTAL	

POSTAGE RATES: Please add 50p for post & packing on all orders under £5.
EEC countries add £1 per item.Non EEC countries add £4 Per Item
PAYING BY CHEQUE - Cheques payable to Software City.

Credit Card Type Expiry Date

Card No....................

Signature....................EUROPEAN ORDERS, MASTER CARDS,

Date....................EUROCARDS ACCEPTED.................... **CU 04/93**

BACKCHAT

Here to answer another bulging mailbag of insults, innuendo and, horror of horrors, even a few compliments is the one, the only (thank god), Nick Veitch. Take it away...

BIT OF A PROBLEM

I am the owner of an Amiga 500 and have noticed the release of a new 32-bit Amiga 1200. I would like to know if there is an upgrade to make my A500 into a nice 32-bit A1200?

Robbie Payne, Newcastle-upon-Tyne

Hmm. Well, for a start you should have addressed your question to Q&A, and for seconds: No. Next Please...

UPGRADE PATH

Having recently upgraded to a CDTV I have a number of questions concerning the future of this machine.

(1) Given that CDs only cost a pound to produce is there any chance of seeing huge games (like *Monkey Island 2*) being put on CD at a reasonable price?

(2) Could you review *Sherlock Holmes Consulting Detective* as I would like to buy it?

(3) I was informed by my dealer that an MPEG cartridge would be available soon, allowing me to see real time Full Motion Video on the CDTV, and that various films would become available for it.

Also, have you ever considered that many people may own a console as well as an Amiga? I have a SNES and a Megadrive.

L. Fairgrieve, Gwent

Given that the development time for *Monkey* remains a constant across all versions, if it makes it to CD it will probably not be a bargain, even if it is about £5 less to produce. As for an MPEG cartridge, yes it will enable the CDTV to display FMV, but whether that means it will be produced, and whether it is supported by developers and whether Commodore licence the technology to enable you to view films on CD – it all adds up to a whole lot of whethers. Contrary to popular belief I am not psychic, just incredibly intelligent, so I can't say what will happen.

The signs are that Commodore are very keen on developing a viable CD multimedia engine, which will play Amiga games and do everything a CDi unit can do, but you may find that the CDTV will not be compatible with the dream machine when it arrives.

It is interesting that you and so many of your friends have Amigas and consoles – are you all exceptionally rich?

And the next contender please...

INSIDE INFORMATION

It can now be revealed: Dino Dini, the brains behind *Kick Off* and *Kick Off 2*, hates football. Amazingly, the man responsible for the most addictive soccer sim in the whole of creation is blessed with two left feet when it comes to kicking a ball about. Not only that, but he can't stand to watch the game either! He only came up with *Kick Off* after software house, Anco, had badgered him into doing a sports game.

BOTTOMS UP

Please explain to our friends and parents that the Amiga is far more advanced than the PC in everything relating to graphics and sound.

By the way do you know that in Portugal, 'CU Amiga' means 'Ass Amiga'?

Bruno Fereira and Joao Miguel, Portugal

Well, I tell you what, rather than starting the whole Amiga vs. PC debate again, perhaps you could just cut out every second letter in Backchat from the last six months of the magazine and redecorate your house with them.

As for the mag's name in Portuguese, it's not as bad as the reputation the Vic 20 got in Germany... Come in number 4...

FREAK OUT

More games will load on the A1200 if you change the boot options. Try holding down both mouse buttons and selecting CPU cache OFF and Original chipset from the relevant screens. *Kick Off 2* does work on two players, so does *Streetfighter 2*.

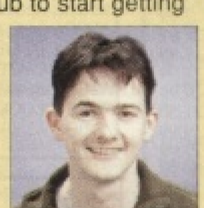
Ed, Cardiff

A1200 owners should note that the boot-menu

TEAM TALK

Want to know what the CU Amiga team have been up to this month? We didn't think so either, but we've a space to fill and just had some lovely new photos taken, so here you are anyway!

DAN 'ADOLF' SLINGSBY



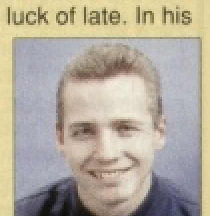
Our super-fit Ed has just enrolled at the local health club to start getting in shape for his summer hols. It's going to be a long uphill struggle, though, as the only exercise he's undertaken in recent times is a quick jog over to the photocopier and a regular work-out with a pint glass at the City Pride. I mean, he even gets tired bashing away at his keyboard! Dan's also recently moved – trouble is, he chose to make his new home above a Kentucky Fried Chicken and now permanently reeks of stale chicken batter. Still, this is a definite improvement, so no-one's complaining too loudly. Gameswise, our illustrious Ed is fighting his way through Team 17's excellent *Body Blows* and having a blast with Electronic Arts' *Desert Strike* conversion.

JON 'DEATH NINJA' SLOAN



The man with the incredible resemblance to a chipmunk has certainly been busy this month. Fed up with Dan's constant quips he has decided to fight back – literally. Having spent his youth in a distant eastern temple, Jon has developed unearthly fighting skills (or so he says), which usually involve smashing his fist repeatedly into a wall whilst swearing blind that he feels no pain! In reality, he has just gained his second dan black belt in TaeKwonDo. Apparently, part of the test was to fight two of the British Army team, who are all Gurkhas. When he told Dan this, our illustrious Ed was seen to go very pale and disappear into the toilet for a short time. On a more gentle note, Jon has been seen practising his skills on *Body Blows*, and trying to remember where he was in US Gold's *Flashback*.

TONY 'CHIPS' HORGAN



The rave meister himself has been having a little bad luck of late. In his search for the perfect rave he was recently spotted on a freezing cold morning trudging around the Elephant & Castle. Despite the reputation that this place has as London's answer to Beirut, Tony was prepared to face the cold and danger to find the party. In the end it all came to naught as the promise of a party turned out to be a wind up.

This little set back has hardly diminished his love of techno-tunes – we have to nail him to his desk all day to stop him sneaking off into the back room for a quick composition.

When he's not working on his synth, Tone can be found racking his brains for a solution to *Lemmings 2*, and beating Dan at *Body Blows*.

options (which you activate by holding down both mouse buttons during startup) can cure some incompatibility problems, but a better bet is the utility on last month's coverdisk. Next...

INCOMPATIBILITY BLUES

I bought *Legend of Kyrandia* in November 1992 and played it on my old Amiga – it is a great game if you like adventures (and even if you don't). But then in December I bought a new A1200 with hard-disk and sold my old Amiga. Unfortunately, *Kyrandia* will not work on my new computer. Everything I tried was useless, not even emulating the old chipset made it work, which leaves me a little confused.

I already own *Eye of the Beholder II*, and this game works fine on the new Amiga. Both *Kyrandia* and *Beholder* were programmed by the same team, Westwood studios, and now I don't understand why the programmers have an older game which works and a newer game which doesn't. What did they do wrong when making *Kyrandia*?

Michael Rupprecht, Germany

It must have been very difficult for you to upgrade to a new machine knowing that some software would probably not work anymore. It is especially annoying if the software is recent, but that's the price you pay when you upgrade.

The problems that occur in games are mainly due to the instructions in the Kickstart ROM being relocated in successive versions. Although this can be overcome by using the systems library calls, this is frowned upon by programmers, who always believe that custom code written by them is going to do the job much better than that supplied by Commodore. In many cases they are right, but that does mean that generally the games are written for the specific machines which are available and not for those which may or may not come along in the future. The problem occurs when games which have a long development time, like *Kyrandia*, are started and a new machine is announced whilst it is already well on the way to being completed. Software houses do get advanced warning and details of new machines, but sometimes this is not enough, and then they are faced with the difficult problem of delaying the launch and fixing the game (which costs them more money) or releasing the game anyway, knowing that it is incompatible. As long as they don't claim compatibility with the Amiga 1200, there is nothing wrong with this. It may seem unfair to you, but it is not unjust. The fact *Beholder 2* works is likely to be pure fluke.

ASSAULT OR ATTACK?

I have been made to feel a complete idiot by your magazine. This is probably not unusual for your readers because I imagine a lot of them are fairly stupid, but in my case it was completely unjustified. Having seen a game I really wanted in the February issue, I went out to the local computer shops to try and find it, only to be told it didn't exist. At first I thought the shops were being incompetent, but then I stumbled upon the real answer – the game in question was called *AV8B Harrier Assault*, not *Attack* as you said in your magazine.

Was this simply a terribly stupid mistake on your part, or is there some more sinister reason, like the game not being finished when you reviewed it?

S.Waters, Bournemouth

Hah, if only every question was as easy to answer – yup, you're right. Mark Patterson confesses it's all his fault, he botched it up totally and got the name wrong. He claims he was terribly overworked at the time, but we didn't believe him. So, as a punishment, we've sent him to do 10 years hard labour in the United States. We reckon that that's a fate worse than death!!

THE IRISH QUESTIONS

As a veteran CU reader may I say that I feel the magazine has steadily improved over the last year or so, but I do have a number of ideas. With the release of the A1200 I think you should have another buyer's guide and score box. Then you could comment on any enhancements the A1200 version had over the normal software.

The cover disks are next. I have been thinking that one of the playable demos should be made A1200 only. This would not only encourage people to buy an A1200, but would also allow A1200 owners to see some of the great games which are being designed for it.

What about a CD ROM drive for the A1200? Isn't it about time that someone got it sorted out? CDTV is pretty crap – it is only a 68000 with 1Mb RAM and Kickstart 1.3. This will be a great disadvantage for a real CDTV if it comes out, because developers will want to make software which is compatible to both machines. This is what happened to the Spectrum when the 128K Speccy came out.

And finally, I hope you lot in London enjoy all the great computer shows that you get to go to. I do not like to sound bitter but here in Northern Ireland we are not treated to anything at all. How I would love to see such a show bless our Ulster Hall. I am sure there are enough people over here to justify a show, why hasn't there been one?

Simon Markey, Bangor, Co. Down

We have changed the scoreboxes to show A1200 compatibility, and when dual versions of games are out you will be made aware of the differences. We will be reviewing some A1200 software in its own right soon.

It would be nice to think that if we put an A1200 demo on our disk that people would go out and spend a lot of money on a machine just to get the most out of the magazine. It is a bit unlikely though. You have to remember that there are only about 60,000 A1200s in the UK, compared to over a million other Amigas, and we have to cater to them all. I am sure that we will have an A1200 demo in future, but I don't think that now is the time to say it will be a regular feature.

You are quite right about the CDTV. Everyone who bought a computer in the early 80s learnt fairly quickly that having a technically brilliant machine meant nothing unless there was the marketing clout and commitment of the software industry behind it. I think that the next CD machine released from Commodore will most likely be aimed squarely at the entertainment market. It may support current CDTV software but will have advanced features. The trick behind this is that CBM will no doubt fork out a lot of cash to have titles developed to take advantage of the new machine well before its launch.

I take your point about living in Northern Ireland. There are very few decent computer shops, never mind any good shows. Unfortunately, you will never see a major computing event staged at the Ulster Hall, King's Hall or even Bangor market. There are two reasons for this – firstly, the expense of moving all the equipment and stock necessary all that way, just to sell to a relatively small audience and secondly, because most of these soft English people think that Belfast is twinned with Sarejevo and they'll be dodging sniper fire the moment they touch down at Aldegrove.

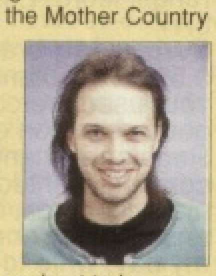
The only thing you can do is to persuade someone to organise one for you. It may take time, but if you get in touch with other Amiga owners (put an ad in the Spectator perhaps?) and get a really large group together you may be able to persuade some local computer stores to sponsor a small show.

It's not all a bed of roses here anyway – the Guinness is terrible and it's impossible to find soda bread in the shops. You can't get Tayto crisps either in fact – so if you want me to campaign on your behalf a few bags of cheese and onion for a BGS old boy would be appreciated.

INSIDE INFORMATION

The hairy, headbanging member of the CU Amiga team, Tony Dillon, used to be the front man for a rather good games video called Click, otherwise known as the computer equivalent of Press Gang. Reviewing all the best Amiga and PC games, the video magazine was a roaring success in the shops (or so Tony tells us – fiver in the post please!). Unfortunately, Click was consigned to an early grave after much of the funding behind the project disappeared abroad and the world was a sadder place all round. But don't dispare, as El Hairy One is about to make a comeback in a top secret video project destined to appear in a newsagents near you soon. You have been warned!

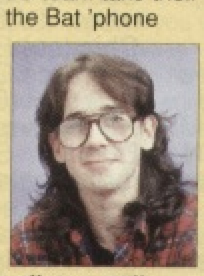
NICK 'IS HE IN YET?' VEITCH



Our very own alleged terrorist was last seen visiting the Mother Country carrying a suspicious looking parcel. We promptly informed Special Branch who picked him up at the airport. Despite the fact that the parcel turned out to be a cake for his dear, grey-haired old mum the polite police officers subjected Nick to a full body cavity search – he hasn't been able to sit down for a week since. But, being a big hearted sort of guy, he instantly forgave us and promised to send us all a special present by post.

Nick doesn't play games — he's far too serious for that — except when no one's looking, that is. When pressed he admitted to looking at *D-Day*, from US Gold, and *Lemmings 2* but not actually playing them you understand.

TONY 'ON A DIET' DILLON



When the regular CU team take their hols, we reach for the Bat 'phone and draft in Tony. The greasy grebo (as he's effectionately known at CU Towers) has been in the industry longer than anyone really cares to remember, starting off as a staff writer when he'd just left school. These days he's a freelance writer – meaning he gets to stay in bed while the rest of us are hard at it. For the last two weeks, though, Tone has had to be in at 9.30am prompt and he's beginning to show the strain. It's a good job that everyone is back from their hols now, as we doubt whether he'd have lasted another week. Now it's back to getting up at one in the afternoon, taking long hot baths, and generally slobbing around (which is something Tony is particularly good at).

If you want to appear in the Sell Out page please call Becky White on this no: 071 972 6700

SELL OUT

DON'T LOOK NOW

There is a maddening new horror that lies within the Gothic foundations of Farlight House. 15 Characters (Priest, medium, warlock), 132 skills (Hypnotism, Marksmanship, psychology), work alone or with others, character development throughout the game, detailed atmospheric text accompanying all actions, auto mapping, realistic fighting and time system, a large six floor mansion and things that lie hidden in darkness.........
£6 payable to Gothic Games is all you need to start your journey into terror. Gothic Games, Highlands House, 14a Combe Close, Yeovil, Somerset, BA21 3PA.

DISK AUSTRALIA MAGAZINE ON DISK

Disk Australia is a huge 3 disk magazine. The magazine offers about 4 times the reading of conventional magazines. Best of all, the magazine is bought world-wide. It offers support to everyone and everything on Amiga - from Games to D.T.V to Music to Amos to CDTV to even a Aussie hoilday Guide!! You will NOT be disapointed! - Please send 7 pound cheque to:

ARGYLE PUBLISHING
P.O. BOX 418
COWANDILLA 5033
SOUTH AUSTRALIA,
AUSTRALIA

Exorcist Ferrox, Cannibal, Holocaust, Aliens - Special Edition, Evil Dead 1 & 2, Thing, Alien Widescreen, Texas Chainsaw Massacre. All titles 2 disks, 2 drives. Amiga + compatible. £3.00 each + 60p P&P. K.Howell, 54 Collin Road, Brislington, Bristol, BS4 3SD.

Cheats for over 900 games covering 200 pages only £4 including P&P! Alex Barley, 80 George Street, Maulden, Beds, MK45 2DD.

Lorrox Public Domain Over 1,200 disks from 80p 1st class P&P. Fast reliable service. Send SAE plus two 1st class stamps for catalogue to: 57 Broughton Road, Summerston, Glasgow, G23 5HL.

Desktop Video Titling Kit 8 disks incorporating backgrounds, symbols, IFF Fonts, Videotools Plus Tutorial Video £24.99 (Including P&P) D/Paint and 1 Meg recommended. Studioarts, 5 Cresswell Court, Hartlepool, Cleveland, TS26 OES.

A500/A500+ /A600 Amiga PD from 35p, Amiga accessories, unique offers, something for everyone! For free details and disk catalogue whip two stamps off to; Redlaw Resources PD, 74 Durban Road, Patchway, Bristol BS12 5HQ.

Window Operated Manuals filck through disk based manuals in a jiffy comes with 580 manuals (DOS 2/1.3, exec...) Send £5 to: Bernard Piette Collingwood College, South Road, Durham DH1 3LT.

KT's PD Software. 500/+600 all disks 80p each Send SAE for list, or 50p for catalogue + goodies to: KT's PD Software, 75 The Drive, Rochford, Essex SS4 1QQ.

New Amiga Contacts Wanted! Please send your disks and lists to: Mr Psycho, Losbatvn, 12, N-4056 Tananger, Norway. All letters answered. Disks = fast reply!

Purely PD From Free - 80p! For our new catalogue send a SAE to: 11 Hood Crescent, Wallisdown, Bournemouth, Dorst, BH10 4DA.

Best PD-Library! Lightening Fast Service, prices from 34p. Send 2 unused disks or international reply coupon for list-disk to: NPDL B, Otto, Valstads Vel Tob, 136U Hvalstad, Norway.

Master PD. For the best in Amga PD send disk and SAE or 70p in stamps for catalogue. Disk to: 44 School Lane, Easton Bray, Beds, LU6 2DT.

Amiga Penpal Club: 1 life membership. Games list every change. Send info including favourite game and type. Will match a friend. SAE to: Diskpal, L.Opthore, Epsom Road, Leatherhead Surrey, KT22 8SP.

Over Twenty PD arcade classics, Pacman, Frogger, Invaders, Asteroids, Tetris, etc. Send cheque for £6 to Carl Harper, 9 Hale Road, Hough Green, Widnes, Cheshire, WA8 8SF.

Chic : The best Amiger User Group. Contacts/PD Second hand goods/much more. SAE for deatils: Chic (cu) Box 121, Gerrards Cross, Bucks, SL9 9JP (0753) 884473

PD Power Amiga Public Domain. Send an SAE for full catalogue. Disks only 80p each. Loadsa titles available. Write to 530 Davidson Road, Croydon, Surrey, CR0 6DH.

Amiga Games For Sale! 1600+ titles available. For sample and catalogue/info, send two blank disks to: Alex, 40 Jalam SS12/2D, SubangJaya, 47500 Selangor, Malaysia. Include 30p for P&P.

A1-PD Send SAE for catalogue to: J.Atkinson, 44 Glynfellis, Gateshead, NE10 8RJ. 48 hour despatch and free postage.

Amiga Public Domain Software for sale hundreds of games, utilities, Clip Art from 35p for catalogue send SAE to: 89 Wolverhampton Road, Codsall Wolverhampton WV8 1PL.

Wanted Amiga Contacts in the UK. Send lists to: Chris and Jut, 46 Woodmancott Clsoe, Forest Park, Bracknell, Berks, RG12 3XU.

We require Computer Artists, Animators & Programmers (Amiga). Please send your details and an SAE to: Mr R.Jose, 201 Aldborouch Road, South, Seven Kings, Ilford, Essex, 1G3 8HY.

Swapping brand new 3.5" DSDD blank disks for your used mercury cards, good condition essential. Regular exchange contacts wanted. No mercury cards, no answer. Try and make my day, write to David James, POB !!54, London W3 8PZ.

Please can I have an Ad in Sell Out

I enclose cheque / P.O. for £.........

Name...

Address.......................................

...

...

Total number of words ....

Post to: Ad Dept, CU Amiga, Priory Court, Farringdon Lane, London EC1R 3AU.

Lineage - 30p per word to private individuals - 20 words min. 40 words maximum, 40p per word to trade, 20 words min - 40 words maximum. Semi-display - £15 for S.C.C. Ring 071 972 6700.
All classified & Semi-display advertising is pre-payable. All classified ads are subject to space availability. WARNING - It is illegal to sell pirated copies of computer games. The only software that can be sold legitimately through our classified section are genuine tapes, disks or cartridges bought from shops or by mail order from software houses.

INSIDE INFORMATION

Not everything is rosy in the Commodore camp at the moment. Despite surging sales of the A1200, making it their most successful launch ever, the US parent company has just announced an alarming drop in profitability. In their second quarter to December 31st, Commodore have reported a net loss of a staggering £55 million. This compares to a profit of £30 million in the comparable quarter of 1991. Commodore's UK managing director, Kelly Sumner, was heard to comment: 'If you're going to lose, you may as well lose big!'. That'll rally the troops, we're sure.

DAYLIGHT ROBBERY

I was recently burgled and the thieves took away my Amiga, hard-drive, colour printer, games and CU coverdisks 44-47. I can replace everything but the coverdisks containing precious utilities and demos.

I would also like to be able to buy back issues of CU Amiga. I would really like to get hold of the May and June 1990 issues to complete my coverdisk collection.

Rick Attrill, Boscome, Dorset

Well, I hope you were well insured. The problem is that due to lack of space in our offices, we only keep reference copies of issues more than a couple of months old. You can order the back issues by calling the back issue department on 0858 410 510. I don't think that even they will have issues that date back to 1990 though.

POLICY OF LIES

Is it true that you review unfinished games? I've been reading another magazine which claims that it's the only one to review finished products and that everyone else cheats and reviews unfinished versions. I'm a little bit miffed to find that my favourite magazine (that's you, or at least it was until I read the other magazine's Policy of Truth) has been hoodwinking me by reviewing half-complete games. I've always used your reviews to help me decide what to games to buy. Although I've never been disappointed with any of your recommendations, I think I'm going to be a little more wary in the future.

Douglas Campbell, Firth

Dan replies: Your letter is one of several we've received on the so-called Policy of Truth another magazine has been running, and I can tell you it's a big load of tosh. I'm incredibly angry that they should be adopting this holier than thou approach as it's pulling the wool over their readers' eyes. Let's put the record straight: EVERY Amiga magazine reviews unfinished software. Sorry if this comes as a shock, but at least we're honest enough to say it. I don't mean we review a couple of screenshots and a press release as some other magazines have been known to do – that would just be plain stupid and the software companies concerned would almost certainly sue us out of existence. Nine times out of ten we review finished product, but there's always the chance to snag an exclusive review of a really hot game and this can sometimes mean we'll have to review a Beta test version. This means that the game is virtually complete and is undergoing final play tests to uncover any bugs and flaws in the gameplay. And no, we don't do a deal with a software company to artificially boost a game's mark – they're more interested in the number of pages we're going to give their game and whether they'll get a mention on the cover. They know we'd just laugh in their faces if they suggested we come to an 'arrangement' over the mark in exchange for an exclusive. And yes, even the contrite people who hide behind the Policy of Truth statement do exactly the same. If they want to pretend otherwise, then let's hear their response in these very pages. I'm offering them an unedited Right of Reply next month – let's see if they take up the challenge. I'm not holding my breath though.

By reviewing unfinished software we aren't trying to rip off our readers. If we waited for a finished boxed copy of a game, because of the time it takes to put a magazine together the review would almost certainly appear a couple of months after the game has gone on sale. And that's of no use to anyone.

WHY, WHY, WHY?

Why do you have such stupid pictures to introduce the Amiga Workshop section? The last one was a picture of Captain Kirk and Mr. Spock. I can't think of any relevance it had to the section.

Paul Harrisson, York

You mean you don't know why we include kitsch sci-fi pictures on the Amiga Workshop intro page? No, neither do we, except Dan thought it was a good idea one night after several pints in the City Pride next door and no-one's dared tell him it was a stupid idea in the first place. Still, we've made an effort to improve things, and this month's picture is much more sensible. Or maybe not.

DOUBLE DISKS

I noticed that Amiga Format have dropped one of their disks and have reduced their price to £3.25. Are you about to follow suit, or have you decided to tough it out at two disks for an extra 70 pence? I mention this as I've really enjoyed the free commercial programs you've given away recently, and I'd be disappointed to see them discontinued. You wouldn't be able to have a games-specific or utility-specific disk anymore and that would be a great shame. As it stands, you offer something for everyone.

Samuel Smith, Wimbledon

There are a number of pressing problems that might make us abandon the double disk policy we've been running for the last 12 months. The European Commission is currently debating a 30 per cent levy on imported disks to help out European manufacturers. If this should go ahead we'll have to abandon one of our disks, or else put up the cost of the mag to more than £5 – and I think we're expensive enough as it is already! There's also the threat of magazines being charged VAT in the upcoming budget (which will have come and gone by the time you read this). If that happens, the second disk will also have to go. Having said all that though, if there's any possible way, we'll keep hanging on to our double disks as long as possible as we think they represent exceptional value for money.

And on the subject of disks, we've got some real corkers lined up for you later this year. How does *Art Department* grab you, or a huge demo of *Desert Strike*? There are a lot more top quality programs in the works so keep watching.

DAN AT WORK!



Here's Dan doing what he does best – absolutely nothing! While the rest of the team work their fingers to the bone, the old big Ed can usually be found hob-nobbing with top industry figures and generally swanning about on freebie lunches. So, it seems only appropriate that one of our readers, The Masked Artist, should have sent in this oh-so-true-to-life picture of Dan with his feet up (yet again). So much for his latest fitness regime – we said it wouldn't last more than a week! Who said life imitates art?! [*It's not true, I tell you. You're all sacked, I'll see your careers in ruins and, what's more, you'll never be allowed to play games during office hours again – Dan*]

GET YOUR KICKS

Thank you, thank you, thank you. What am I referring to, do you ask? The amazing Relokick 1.3 program you gave away on your March coverdisk, that's what. Ever since buying an A1200, I've been waiting for a program like this. Almost half my library of games was completely redundant and wouldn't work on the new machine, but now almost all of them will. Once more, I can sit down with my nephew and lose badly at a game of *Speedball 2*. So once again, thanks a lot CU Amiga.

David Cooper, Portsmouth

INSIDE INFORMATION

What do MCA, Time Warner, Electronic Arts, AT&T and Matsushita have in common? If you don't already know, they're just some of the heavy weight names backing what promises to be the ultimate games machine. The new console, named the 3DO Multiplayer, is similar in concept to the Amiga in that the main processor is supported by custom graphic and sound chips. This in itself isn't very surprising as the 3DO has been designed by three of the original team who developed the Amiga all those years ago. What is surprising is the machine's specs. Built around a 32 bit RISC processor and double speed CD ROM drive, the machine will also be capable of supporting music CDs, the Kodak Photo CD and full motion video disks. What's more, you'll be treated to 24 bit animations running at 50 times the speed of those on a bog-standard home computer! Impressed? You should be! Launching in the US this November, a UK launch is a while off yet, but we'll keep you posted. So now, when your smug and misguided console-owning friends start to rant about how marvellous their machines are, you can tell 'em they own a piece of antiquated history. Serves 'em right, they should have bought an A1200 instead.

Send your letters to: BACKCHAT, CU AMIGA, EMAP IMAGES, PRIORY COURT, 30-32 FARRINGDON LANE, LONDON, EC1R 3AU.

THE JAPANESE MASTER PLAN

Technology, eh? Who'd have it? Matt Black, out of Coldcut, wouldn't be without it.

Technology. Alternative New Edge spelling: techKNOWLEDGE E. Love it or hate it, there's no longer any chance of getting away from it, and you need to know about it to ride the coming waves. Stand by for the deep rant.

Technology is now the most powerful force shaping our world. Technology currently enables man to achieve test tube babies, generate computer art, build robot car-clampers, grow square tomatoes, make house music (and any other kind of music), play video games and, of course, generally distress the world's resources at hitherto undreamed of rates. Technology is Yang to Nature's Yin – and well out of balance.

TECHNOLOGY – I LUV YOU

However, we can no longer live without our techno toys and, personally, I don't want to. Reading CU, you are presumably well into your Amiga. Excellent machine, shame about the crap company though. My venerable A2000 has seen sterling service on the cyber graphix tip (not to mention man-years lost on such worthwhile pursuits as *Speedball 2*, *Lemmings* etc.), but I quite fancy a 4000 or even a 1200, which I rate as something of a snip at about £400. I have to admit to being a bit of a MacHead as well. Up until now the software was light years ahead of Amiga stuff in terms of usability and power.

TECHNOLOGY – WHAT COST?

Trouble is, I still need a 24-bit colour card and an encoder to record my Mac stuff onto tape. Another £1K. AND another 24-bit card for my Amiga. (At least the Amiga can move graphics around quicker than the Mac.) How much was that Betacam pro video recorder? You what? £12K+VAT? Maybe I'll just use the old VHS a bit longer. The first thing you usually learn when you start trying to actually control technology is that you always need just one more box before you can do exactly what you want. Keeping up with the Joneses just got changed to keeping up with the Boffins. The nice thing about the Amiga is that the boxes at least are cheaper than those for the Mac.

Ranting on about which type of computer/operating system/church is best is a classic example of what hackers call 'Holy Wars'. People who do it to excess are called 'flamers' and are not cool, dude. So, I'll desist – except to say that the ultimate answer is a computer as cheap as a PC, with Mac-like software, the sound capabilities of the Falcon and the graphics power of the Amiga. Sorted.

Matt Black meets cyberspace. How long will it be before all pop musicians look like this?



Technology will give you the power to fully realise your creative abilities in several fields simultaneously, e.g. composing, mixing and recording music, writing, painting, animating and designing and, of course, playing games, all from a machine that will sit comfortably on a desk. Yes. It shall happen. Real soon now.

MUSIC TECHNOLOGY

As half of Coldcut, dance music has provided my living for the last six years. With people making tuff records just using Amigas, I'd like to give a salute to the other major machines of the dance world. Let's give it up now for the top Tech Knowledge E boxes.

1. Equal top billing for the Akai S1000 sampler and Technics SL1200 deck. Snatch and Scratch – a deadly combo. The duo that launched 1000 hits and 1000 writs.
2. Atari 1040/Creator/Cubase – the non-musicians revenge. Putting MIDI sockets on the Atari was a brainwave and was the sole reason for making it a successful machine. It's old now, but still very popular.
3. Equal and massive respect to Roland 909, 808, 707, 727, 303, 202, 101, JX8P, Juno, JD 800, MKS50, etc. Yes, yes a big shout out to Korg, Yamaha, Casio, etc. who all do some good boxes – but Roland rules house music and no arguments please.
4. Akai MPC/Linn thang. Wicked drum pads sequencer. I don't use it but I know several people who do. Like Nellee Hooper (Soul II Soul).
5. Numark 1775 sampler/mixer: instant gratification to the bedroom DJ. Just tap, tap and... I could listen to that loop for ever. Honourable mention for Phonic Xfade mixers – dirt cheap and perhaps the poor scratcher's favourite.
6. Publison Infernal Machine: £40K machine that can pitch shift/time stretch a whole track. A useful professional lifesaver, but in this list due mainly to having an excellent name.
7. Sony Walkman – essential protection device for urban environments such as the tube. Play loud. But watch that nutter. He's got a bad case of technophobia. He wants to tear your ears off for enjoying what the Japanese Master Plan is doing to us. Don't get the Gameboy out or he'll really freak.
8. Sega Megadrive – wastes even more studio time than looking for the skins. Most people's introduction to computers looks like this. Could be worse. But remember: playing computer games = fast forwarding your life.

TECHNO – WHAT IT IS

Deep, stupid thought for the day: techno music is the sound of a conversation between Man and the Technology he has created. If you don't understand what I mean, you need to spend more time listening to your fridge. Go and do it now.

Don't you think these images speak for themselves !

DISTRIBUTION ENQUIRIES WELCOME

ONLY £99.95

Jason Holburn, Amiga Format December 1992 issue..

"Vidi Amiga12 ... The best value digitiser on the market !"

Mat Broomfield, CU Amiga January 1993 issue.

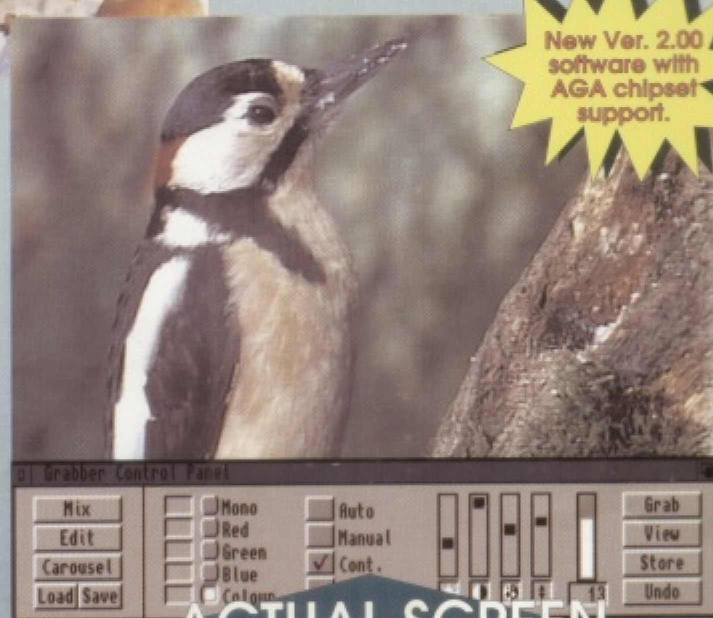
"Vidi 12 gives unequalled results for anything within £200 of its price....Forget the competition. If you can afford Vidi 12, buy it. If you can't afford it, borrow it from someone who can !"



Alan Puzey, Amiga User Int. January 1993 issue.

"..I compared Rombo and Digiview digitisers extensively. To summarize them...I judged the Rombo results to be more consistent and have the edge on quality !"

New Ver. 2.00 software with AGA chipset support.



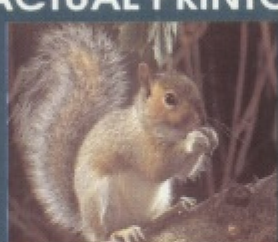
ACTUAL SCREEN

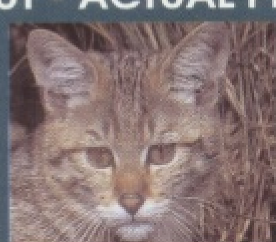
If you want the ultimate quality images at a price you can afford then there is only one choice...Vidi Amiga 12. The Video Digitiser that all others follow !

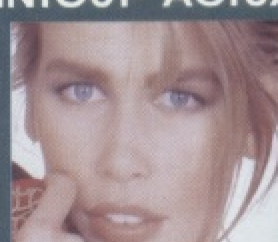
Now supports all new A1200 modes up to a maximum resolution of 704 x 566, has improved animation features with enhanced user interface.

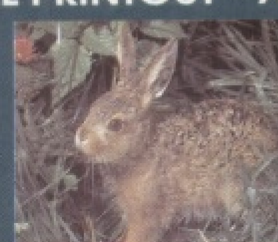
VIDI-AMIGA 12

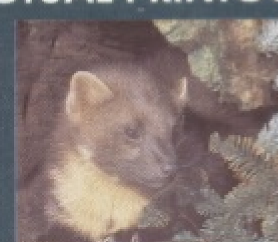
- ACTUAL PRINTOUT - ACTUAL PRINTOUT- ACTUAL PRINTOUT - ACTUAL PRINTOUT -











- ACTUAL PRINTOUT - ACTUAL PRINTOUT- ACTUAL PRINTOUT - ACTUAL PRINTOUT -

THE WORLDS BEST SELLING AMIGA DIGITISER

For more Information call: (44) 0506 414631 or Fax (44) 0506-414634

Rombo Productions Ltd. Kirkton Campus, Livingston, SCOTLAND, (UK), EH54 7AZ.

THINK OF IT AS A WAY OF LIFE



(OR DEATH)

SPECIAL EDITION
AVAILABLE FOR A LIMITED PERIOD ONLY

Containing: A Unique A2 Poster • A 'Digitise Your Own Face' Offer Allowing you to actually star in Legends of Valour.

JOURNALISTS see new titles every week, each one claiming to be the best of it's kind, to date. Yet at the recent European Computer Trade Show it was the journalists themselves that could be found singing the praises of one new title in particular - LEGENDS OF VALOUR.

KEVIN BULMER (The Designer of Corporation) and IAN DOWNEND the creators of LEGENDS OF VALOUR, were literally jostled off their feet as writers, retailers and fellow programmers sought to experience what one prominent industry figure called "A game that's more a way of life - utterly extraordinary."

Demo disks can only scratch the surface, screenshots in magazines could never do the astounding graphics justice (that's why you'll see none here). The only way to really find out what all the fuss is about is to experience it for yourself. LEGENDS OF VALOUR - The Dawning will be available on Amiga, ST and PC very soon.

Ask your retailer for more details or send a S.A.E. to Danielle Woodyatt at the address below for an information pack.

synthetic dimensions

U.S. GOLD

U.S. Gold Ltd, Units 2/3 Holford Way, Holford, Birmingham. B7 6AX. Tel 021 625 3366.

GOLD PHONE

HINTS TIPS 'N' HELP CALL THE GOLD PHONE: SPELLJAMMER • PROPHECY OF THE SHADOW • THE SUMMONING • DARK SUN • EYE OF THE BEHOLDER • LEGEND OF DARKMOON (EYE OF THE BEHOLDER II) • DRAGONS OF FLAME • HEROES OF THE LANCE TEL: **0839 654 139** OPERATION STEALTH • ANOTHER WORLD • FLASHBACK • CRUISE FOR A CORPSE TEL: **0839 654 284** LUCASFILM HELPLINE • LECHUCK'S REVENGE (MONKEY ISLAND 2) • INDIANA JONES (LAST CRUSADE & FATE OF ATLANTIS) • ZAK MCKRACKEN • MANIAC MANSION • LOOM • SECRET OF MONKEY ISLAND • BATTLE OF BRITAIN TEL: **0839 654 123 INFORMATION LINE: 0839 654 124** • LEGENDS OF VALOUR TEL: **0839 993 366** • ACCESS HELPLINE: AMAZON TEL: **0839 654 394** • SIR TECH HELPLINE: CRUSADERS OF THE DARK SAVANT TEL: **0839 994 477**

Service provided by U.S. GOLD LTD., UNITS 2/3 HOLFORD WAY, HOLFORD, BIRMINGHAM B6 7AX. If you are under 18 please get permission to use the telephone. Calls cost 36p per minute cheap rate, 48p per minute all other times.